

# ATTORNEY DOCKET NO. 6223.N

## SEQUENCE LISTING

<110> Lowery, David E.  
Geary, Timothy G.  
Kubiak, Teresa M.  
Larsen, Martha J.

<120> MODULATORS OF G PROTEIN-COUPLED RECEPTORS

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<170> PatentIn Ver. 2.0

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Trp Cys Met Leu Tyr Ala Ile Ile Ala Phe Met Ala Val Val Gly Asn	
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210 215 220	
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Leu Val Ala Ser Ser Gly Asn Phe Leu Val Val Tyr Val Val Met Thr	
50 55 60	
aac aag cga atg cag acg atc acc aac att ttt att aca aat ctc gca	240
Asn Lys Arg Met Gln Thr Ile Thr Asn Ile Phe Ile Thr Asn Leu Ala	
65 70 75 80	
gtt tct gat ata atg gtt aac ttt aca tct ttg tgg ctt aca cca aca	288
Val Ser Asp Ile Met Val Asn Phe Thr Ser Leu Trp Leu Thr Pro Thr	
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Tyr Thr Ser Ile Gly His Trp Ile Phe Gly Gly Gly Leu Cys His Gly	
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Leu Pro Leu Phe Gln Gly Thr Ser Ile Phe Ile Ser Thr Trp Thr Leu	
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Ile Val Leu Ile Trp Leu Cys Ser Leu Leu Leu Val Thr Pro Tyr Ala	
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Cys Ser Glu Asp Trp Ser Asn Ala Glu Phe Arg Ser Ile Phe Gly Ile	
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Val Val Met Ile Leu Gln Phe Ile Leu Pro Phe Val Leu Ile Ala Ile	
210 215 220	
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Ser Tyr Ile Lys Ile Trp Leu Phe Leu Asn Ser Arg Gln Ser Met Thr	
225 230 235 240	
gag aga aaa tcc gat atc aag cgc aaa aag cgt tta cta cgg atg ttg	768
Glu Arg Lys Ser Asp Ile Lys Arg Lys Lys Arg Leu Leu Arg Met Leu	
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Phe	Ser	Phe	Val	Phe	Leu	Ser	Val	His	Leu	Met	Ser	Met	Thr	Ala	Thr	290	295	300
Ala	Trp	Asn	Pro	Ile	Leu	Tyr	Ala	Phe	Met	Asn	Glu	Thr	Phe	Arg	Glu	305	310	315
Glu	Phe	Ala	Lys	Val	Val	Pro	Cys	Leu	Phe	Ala	Arg	Arg	Pro	Gly	Thr	325	330	335
Gly	Pro	Ile	Arg	Val	Ile	Thr	Glu	Arg	Thr	Ala	Met	Ile	Thr	Asn	Pro	340	345	350
Phe	Arg	Arg	Ala	Asn	Arg	Lys	Lys	Lys	Val	Glu	Glu	Gln	Pro	Val	Thr	355	360	365
Val	Ile	Ser	Asp	Ser	Glu	Ser	Pro	Leu	Gln	Thr	Ala	Val	Glu	Pro	Gln	370	375	380
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              20              25              30

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Met Glu Tyr Phe Arg Pro Phe Phe Ile Ser Met Tyr Cys Ala Val Phe
              35              40              45

ttg gtt gct agt tcc ggt aat ttt ttg gtg gtg tac gtt gtg atg acg 192
Leu Val Ala Ser Ser Gly Asn Phe Leu Val Val Tyr Val Val Met Thr
              50              55              60

aac aag cga atg cag acg atc acc aac att ttt att aca aat ctc gca 240
Asn Lys Arg Met Gln Thr Ile Thr Asn Ile Phe Ile Thr Asn Leu Ala
      65              70              75              80

gtt tct gat ata atg gtt aac ttt aca tcg ttg tgg ctt aca cca aca 288
Val Ser Asp Ile Met Val Asn Phe Thr Ser Leu Trp Leu Thr Pro Thr
              85              90              95

tac acc tca ata gga cat tgg ata ttc gga ggt gga ttg tgt cat ggt 336
Tyr Thr Ser Ile Gly His Trp Ile Phe Gly Gly Gly Leu Cys His Gly
              100              105              110

tta ccc ctg ttc caa ggt aca agt atc ttc atc agt acg tgg aca ctt 384
Leu Pro Leu Phe Gln Gly Thr Ser Ile Phe Ile Ser Thr Trp Thr Leu
              115              120              125

acg gct ata gcc ata gat cga tac ata gtg atc gtg cac aac tca tca 432
Thr Ala Ile Ala Ile Asp Arg Tyr Ile Val Ile Val His Asn Ser Ser
              130              135              140

aat atc aat ata aat gat aga atg tcc atg aga tct tgc ctt tcg ttc 480
Asn Ile Asn Ile Asn Asp Arg Met Ser Met Arg Ser Cys Leu Ser Phe
      145              150              155              160

att gtc ctc att tgg cta tgc tca ttg ctt ctg gtc act ccg tat gcc 528
Ile Val Leu Ile Trp Leu Cys Ser Leu Leu Leu Val Thr Pro Tyr Ala
              165              170              175

atc aac atg aag ctc aac tac att cat gaa cca tgt gat ttt ctg ata 576
Ile Asn Met Lys Leu Asn Tyr Ile His Glu Pro Cys Asp Phe Leu Ile
              180              185              190
  
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# ATTORNEY DOCKET NO. 6223.N

tgt agt gag gac tgg agc aat gcc gaa ttt cga tct att ttt gga att	624
Cys Ser Glu Asp Trp Ser Asn Ala Glu Phe Arg Ser Ile Phe Gly Ile	
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gtg gtg atg att ctt caa ttc att ttg cca ttt gta ctc att gcc att	672
Val Val Met Ile Leu Gln Phe Ile Leu Pro Phe Val Leu Ile Ala Ile	
210 215 220	
agt tac ata aaa ata tgg ttg ttc cta aat agc cgt caa agt atg acc	720
Ser Tyr Ile Lys Ile Trp Leu Phe Leu Asn Ser Arg Gln Ser Met Thr	
225 230 235 240	
gag aga aaa tcc gat atc aag cgc aaa aag cgt tta cta cgg atg ttg	768
Glu Arg Lys Ser Asp Ile Lys Arg Lys Lys Arg Leu Leu Arg Met Leu	
245 250 255	
att gtc atg gtg gtc atc ttc gca att tgc tgg ttc cca ttc aac ctc	816
Ile Val Met Val Val Ile Phe Ala Ile Cys Trp Phe Pro Phe Asn Leu	
260 265 270	
tta aac tgt ctc cga gat ctc aag ttg gat aat ttc atg cgt ggc tac	864
Leu Asn Cys Leu Arg Asp Leu Lys Leu Asp Asn Phe Met Arg Gly Tyr	
275 280 285	
ttc agt ttt gtt ttc ctt tcc gtg cat ttg atg agt atg aca gct acc	912
Phe Ser Phe Val Phe Leu Ser Val His Leu Met Ser Met Thr Ala Thr	
290 295 300	
gcc tgg aat cca atc ctc tac gca ttc atg aat gag acc ttc cgt gag	960
Ala Trp Asn Pro Ile Leu Tyr Ala Phe Met Asn Glu Thr Phe Arg Glu	
305 310 315 320	
gag ttc gca aaa gtt gtt ccc tgc ttg ttt gcg cgt cgt cct gga act	1008
Glu Phe Ala Lys Val Val Pro Cys Leu Phe Ala Arg Arg Pro Gly Thr	
325 330 335	
ggg cca att cgc gtc atc act gaa cgc acc gct atg ata act aac ccg	1056
Gly Pro Ile Arg Val Ile Thr Glu Arg Thr Ala Met Ile Thr Asn Pro	
340 345 350	
ttt cga cgt gca aac cga aaa aaa aaa gtg gag gaa cag cct gtt acg	1104
Phe Arg Arg Ala Asn Arg Lys Lys Lys Val Glu Glu Gln Pro Val Thr	
355 360 365	
gtg att tct gag agt cca ctt caa act gca gtg gag ccg cag cgc agt	1152
Val Ile Ser Glu Ser Pro Leu Gln Thr Ala Val Glu Pro Gln Arg Ser	
370 375 380	
atc gtg tat ctc gat gag cct gag aac gga tca agt tgt cag acg ctt	1200
Ile Val Tyr Leu Asp Glu Pro Glu Asn Gly Ser Ser Cys Gln Thr Leu	
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Leu Leu	

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 <212> PRT  
 <213> Homo sapiens

<400> 8



# ATTORNEY DOCKET NO. 6223.N

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Thr	Pro	Ser	Tyr	Gln	Ser	Thr	Cys	Lys	Ile	Lys	Asn	Asn	Pro	Met	Glu	20	25	30	
Met	Glu	Tyr	Phe	Arg	Pro	Phe	Phe	Ile	Ser	Met	Tyr	Cys	Ala	Val	Phe	35	40	45	
Leu	Val	Ala	Ser	Ser	Gly	Asn	Phe	Leu	Val	Val	Tyr	Val	Val	Met	Thr	50	55	60	
Asn	Lys	Arg	Met	Gln	Thr	Ile	Thr	Asn	Ile	Phe	Ile	Thr	Asn	Leu	Ala	65	70	75	80
Val	Ser	Asp	Ile	Met	Val	Asn	Phe	Thr	Ser	Leu	Trp	Leu	Thr	Pro	Thr	85	90	95	
Tyr	Thr	Ser	Ile	Gly	His	Trp	Ile	Phe	Gly	Gly	Gly	Leu	Cys	His	Gly	100	105	110	
Leu	Pro	Leu	Phe	Gln	Gly	Thr	Ser	Ile	Phe	Ile	Ser	Thr	Trp	Thr	Leu	115	120	125	
Thr	Ala	Ile	Ala	Ile	Asp	Arg	Tyr	Ile	Val	Ile	Val	His	Asn	Ser	Ser	130	135	140	
Asn	Ile	Asn	Ile	Asn	Asp	Arg	Met	Ser	Met	Arg	Ser	Cys	Leu	Ser	Phe	145	150	155	160
Ile	Val	Leu	Ile	Trp	Leu	Cys	Ser	Leu	Leu	Leu	Val	Thr	Pro	Tyr	Ala	165	170	175	
Ile	Asn	Met	Lys	Leu	Asn	Tyr	Ile	His	Glu	Pro	Cys	Asp	Phe	Leu	Ile	180	185	190	
Cys	Ser	Glu	Asp	Trp	Ser	Asn	Ala	Glu	Phe	Arg	Ser	Ile	Phe	Gly	Ile	195	200	205	
Val	Val	Met	Ile	Leu	Gln	Phe	Ile	Leu	Pro	Phe	Val	Leu	Ile	Ala	Ile	210	215	220	
Ser	Tyr	Ile	Lys	Ile	Trp	Leu	Phe	Leu	Asn	Ser	Arg	Gln	Ser	Met	Thr	225	230	235	240
Glu	Arg	Lys	Ser	Asp	Ile	Lys	Arg	Lys	Lys	Arg	Leu	Leu	Arg	Met	Leu	245	250	255	
Ile	Val	Met	Val	Val	Ile	Phe	Ala	Ile	Cys	Trp	Phe	Pro	Phe	Asn	Leu	260	265	270	
Leu	Asn	Cys	Leu	Arg	Asp	Leu	Lys	Leu	Asp	Asn	Phe	Met	Arg	Gly	Tyr	275	280	285	
Phe	Ser	Phe	Val	Phe	Leu	Ser	Val	His	Leu	Met	Ser	Met	Thr	Ala	Thr	290	295	300	
Ala	Trp	Asn	Pro	Ile	Leu	Tyr	Ala	Phe	Met	Asn	Glu	Thr	Phe	Arg	Glu	305	310	315	320
Glu	Phe	Ala	Lys	Val	Val	Pro	Cys	Leu	Phe	Ala	Arg	Arg	Pro	Gly	Thr	325	330	335	

# ATTORNEY DOCKET NO. 6223.N

Gly Pro Ile Arg Val Ile Thr Glu Arg Thr Ala Met Ile Thr Asn Pro  
340 345 350

Phe Arg Arg Ala Asn Arg Lys Lys Lys Val Glu Glu Gln Pro Val Thr  
355 360 365

Val Ile Ser Glu Ser Pro Leu Gln Thr Ala Val Glu Pro Gln Arg Ser  
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Ile Val Tyr Leu Asp Glu Pro Glu Asn Gly Ser Ser Cys Gln Thr Leu  
385 390 395 400

Leu Leu

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aca cct tca tat caa agt aca tgt aaa atc aaa aac aac ccc atg gaa 96  
Thr Pro Ser Tyr Gln Ser Thr Cys Lys Ile Lys Asn Asn Pro Met Glu  
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atg gaa tat ttc cgc cca ttc ttt att tct atg tat tgt gct gtt ttt 144  
Met Glu Tyr Phe Arg Pro Phe Phe Ile Ser Met Tyr Cys Ala Val Phe  
35 40 45

ttg gtt gct agt tcc ggt aat ttt ttg gtg gtg tac gtt gtg atg acg 192  
Leu Val Ala Ser Ser Gly Asn Phe Leu Val Val Tyr Val Val Met Thr  
50 55 60

aac aag cga atg cag acg atc acc aac att ttt att aca aat ctc gca 240  
Asn Lys Arg Met Gln Thr Ile Thr Asn Ile Phe Ile Thr Asn Leu Ala  
65 70 75 80

gtt tct gat ata atg gtt aac ttt aca tcg ttg tgg ctt aca cca aca 288  
Val Ser Asp Ile Met Val Asn Phe Thr Ser Leu Trp Leu Thr Pro Thr  
85 90 95

tac acc tca ata gga cat tgg ata ttc gga ggt gga ttg tgt cat ggt 336  
Tyr Thr Ser Ile Gly His Trp Ile Phe Gly Gly Gly Leu Cys His Gly  
100 105 110

tta ccc ctg ttc caa ggt aca agt atc ttc atc agt acg tgg aca ctt 384  
Leu Pro Leu Phe Gln Gly Thr Ser Ile Phe Ile Ser Thr Trp Thr Leu  
115 120 125

# ATTORNEY DOCKET NO. 6223.N

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Thr Ala Ile Ala Ile Asp Arg Tyr Ile Val Ile Val His Asn Ser Ser	
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Asn Ile Asn Ile Asn Asp Arg Met Ser Met Arg Ser Cys Leu Ser Phe	
145 150 155 160	
att gtc ctc att tgg cta tgc tca ttg ctt ctg gtc act ccg tat gcc	528
Ile Val Leu Ile Trp Leu Cys Ser Leu Leu Leu Val Thr Pro Tyr Ala	
165 170 175	
atc aac atg aag ctc aac tac att cat gaa cca tgt gat ttt ctg ata	576
Ile Asn Met Lys Leu Asn Tyr Ile His Glu Pro Cys Asp Phe Leu Ile	
180 185 190	
tgt agt gag gac tgg agc aat gcc gaa ttt cga tct att ttt gga att	624
Cys Ser Glu Asp Trp Ser Asn Ala Glu Phe Arg Ser Ile Phe Gly Ile	
195 200 205	
gtg gtg atg att ctt caa ttc att ttg cca ttt gta ctc att gcc att	672
Val Val Met Ile Leu Gln Phe Ile Leu Pro Phe Val Leu Ile Ala Ile	
210 215 220	
agt tac ata aaa ata tgg ttg ttc cta aat agc cgt caa agt atg acc	720
Ser Tyr Ile Lys Ile Trp Leu Phe Leu Asn Ser Arg Gln Ser Met Thr	
225 230 235 240	
gag aga aaa tcc gat atc aag cgc aaa aag cgt tta cta cgg atg ttg	768
Glu Arg Lys Ser Asp Ile Lys Arg Lys Lys Arg Leu Leu Arg Met Leu	
245 250 255	
att gtc atg gtg gtc atc ttc gca att tgc tgg ttc cca ttc aac ctc	816
Ile Val Met Val Val Ile Phe Ala Ile Cys Trp Phe Pro Phe Asn Leu	
260 265 270	
tta aac tgt ctc cga gat ctc aag ttg gat aat ttc atg cgt ggc tac	864
Leu Asn Cys Leu Arg Asp Leu Lys Leu Asp Asn Phe Met Arg Gly Tyr	
275 280 285	
ttc agt ttt gtt ttc ctt tcc gtg cat ttg atg agt atg aca gct acc	912
Phe Ser Phe Val Phe Leu Ser Val His Leu Met Ser Met Thr Ala Thr	
290 295 300	
gcc tgg aat cca atc ctc tac gca ttc atg aat gag acc ttc cgt gag	960
Ala Trp Asn Pro Ile Leu Tyr Ala Phe Met Asn Glu Thr Phe Arg Glu	
305 310 315 320	
gag ttc gca aaa gtt gtt ccc tgc ttg ttt gcg cgt cgt cct gga act	1008
Glu Phe Ala Lys Val Val Pro Cys Leu Phe Ala Arg Arg Pro Gly Thr	
325 330 335	
ggc cca att cgc gtc atc act gaa cgc acc gct atg ata act aac ccg	1056
Gly Pro Ile Arg Val Ile Thr Glu Arg Thr Ala Met Ile Thr Asn Pro	
340 345 350	
ttt cga cgt gca aac cga aaa aaa aaa gtg gag gaa cag cct gtt acg	1104
Phe Arg Arg Ala Asn Arg Lys Lys Lys Val Glu Glu Gln Pro Val Thr	
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# ATTORNEY DOCKET NO. 6223.N

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370 375 380

ccg cag cgc agt atc gtg tat ctc gat gag cct gag aac gga tca agt 1200  
Pro Gln Arg Ser Ile Val Tyr Leu Asp Glu Pro Glu Asn Gly Ser Ser  
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tgt cag acg ctt ctg ctt ta 1220  
Cys Gln Thr Leu Leu Leu  
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35 40 45

Leu Val Ala Ser Ser Gly Asn Phe Leu Val Val Tyr Val Val Met Thr  
50 55 60

Asn Lys Arg Met Gln Thr Ile Thr Asn Ile Phe Ile Thr Asn Leu Ala  
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Val Ser Asp Ile Met Val Asn Phe Thr Ser Leu Trp Leu Thr Pro Thr  
85 90 95

Tyr Thr Ser Ile Gly His Trp Ile Phe Gly Gly Gly Leu Cys His Gly  
100 105 110

Leu Pro Leu Phe Gln Gly Thr Ser Ile Phe Ile Ser Thr Trp Thr Leu  
115 120 125

Thr Ala Ile Ala Ile Asp Arg Tyr Ile Val Ile Val His Asn Ser Ser  
130 135 140

Asn Ile Asn Ile Asn Asp Arg Met Ser Met Arg Ser Cys Leu Ser Phe  
145 150 155 160

Ile Val Leu Ile Trp Leu Cys Ser Leu Leu Leu Val Thr Pro Tyr Ala  
165 170 175

Ile Asn Met Lys Leu Asn Tyr Ile His Glu Pro Cys Asp Phe Leu Ile  
180 185 190

Cys Ser Glu Asp Trp Ser Asn Ala Glu Phe Arg Ser Ile Phe Gly Ile  
195 200 205

Val Val Met Ile Leu Gln Phe Ile Leu Pro Phe Val Leu Ile Ala Ile  
210 215 220

# ATTORNEY DOCKET NO. 6223.N

Ser Tyr Ile Lys Ile Trp Leu Phe Leu Asn Ser Arg Gln Ser Met Thr  
225 230 235 240

Glu Arg Lys Ser Asp Ile Lys Arg Lys Lys Arg Leu Leu Arg Met Leu  
245 250 255

Ile Val Met Val Val Ile Phe Ala Ile Cys Trp Phe Pro Phe Asn Leu  
260 265 270

Leu Asn Cys Leu Arg Asp Leu Lys Leu Asp Asn Phe Met Arg Gly Tyr  
275 280 285

Phe Ser Phe Val Phe Leu Ser Val His Leu Met Ser Met Thr Ala Thr  
290 295 300

Ala Trp Asn Pro Ile Leu Tyr Ala Phe Met Asn Glu Thr Phe Arg Glu  
305 310 315 320

Glu Phe Ala Lys Val Val Pro Cys Leu Phe Ala Arg Arg Pro Gly Thr  
325 330 335

Gly Pro Ile Arg Val Ile Thr Glu Arg Thr Ala Met Ile Thr Asn Pro  
340 345 350

Phe Arg Arg Ala Asn Arg Lys Lys Lys Val Glu Glu Gln Pro Val Thr  
355 360 365

Val Ile Ser Glu Thr Asp Ser Glu Ser Pro Leu Gln Thr Ala Val Glu  
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Pro Gln Arg Ser Ile Val Tyr Leu Asp Glu Pro Glu Asn Gly Ser Ser  
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Cys Gln Thr Leu Leu Leu  
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aca cct tca tat caa agt aca tgt aaa atc aaa aac aac ccc atg gaa 96  
Thr Pro Ser Tyr Gln Ser Thr Cys Lys Ile Lys Asn Asn Pro Met Glu  
20 25 30

atg gaa tat ttc cgc cca ttc ttt att tct atg tat tgt gct gtt ttt 144  
Met Glu Tyr Phe Arg Pro Phe Phe Ile Ser Met Tyr Cys Ala Val Phe  
35 40 45

# ATTORNEY DOCKET NO. 6223.N

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65 70 75 80	
gtt tct gat ata atg gtt aac ttt aca tcg ttg tgg ctt aca cca aca	288
Val Ser Asp Ile Met Val Asn Phe Thr Ser Leu Trp Leu Thr Pro Thr	
85 90 95	
tac acc tca ata gga cat tgg ata ttc gga ggt gga ttg tgt cat ggt	336
Tyr Thr Ser Ile Gly His Trp Ile Phe Gly Gly Gly Leu Cys His Gly	
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tta ccc ctg ttc caa ggt aca agt atc ttc atc agt acg tgg aca ctt	384
Leu Pro Leu Phe Gln Gly Thr Ser Ile Phe Ile Ser Thr Trp Thr Leu	
115 120 125	
acg gct ata gcc ata gat cga tac ata gtg atc gtg cac aac tca tca	432
Thr Ala Ile Ala Ile Asp Arg Tyr Ile Val Ile Val His Asn Ser Ser	
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aat atc aat ata aat gat aga atg tcc atg aga tct tgc ctt tcg ttc	480
Asn Ile Asn Ile Asn Asp Arg Met Ser Met Arg Ser Cys Leu Ser Phe	
145 150 155 160	
att gtc ctc att tgg cta tgc tca ttg ctt ctg gtc act ccg tat gcc	528
Ile Val Leu Ile Trp Leu Cys Ser Leu Leu Val Thr Pro Tyr Ala	
165 170 175	
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Ile Asn Met Lys Leu Asn Tyr Ile His Glu Pro Cys Asp Phe Leu Ile	
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Cys Ser Glu Asp Trp Ser Asn Ala Glu Phe Arg Ser Ile Phe Gly Ile	
195 200 205	
gtg gtg atg att ctt caa ttc att ttg cca ttt gta ctc att gcc att	672
Val Val Met Ile Leu Gln Phe Ile Leu Pro Phe Val Leu Ile Ala Ile	
210 215 220	
agt tac ata aaa ata tgg ttg ttc cta aat agc cgt caa agt atg acc	720
Ser Tyr Ile Lys Ile Trp Leu Phe Leu Asn Ser Arg Gln Ser Met Thr	
225 230 235 240	
gag aga aaa tcc gat atc aag cgc aaa aag cgt tta cta cgg atg ttg	768
Glu Arg Lys Ser Asp Ile Lys Arg Lys Lys Arg Leu Leu Arg Met Leu	
245 250 255	
att gtc atg gtg gtc atc ttc gca att tgc tgg ttc cca ttc aac ctc	816
Ile Val Met Val Val Ile Phe Ala Ile Cys Trp Phe Pro Phe Asn Leu	
260 265 270	
tta aac tgt ctc cga gat ctc aag ttg gat aat ttc atg cgt ggc tac	864
Leu Asn Cys Leu Arg Asp Leu Lys Leu Asp Asn Phe Met Arg Gly Tyr	
275 280 285	

# ATTORNEY DOCKET NO. 6223.N

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290 295 300

gcc tgg aat cca atc ctc tac gca ttc atg aat gag acc ttc cgt gag 960
Ala Trp Asn Pro Ile Leu Tyr Ala Phe Met Asn Glu Thr Phe Arg Glu
305 310 315 320

gag ttc gca aaa gtt gtt ccc tgc ttg ttt gcg cgt cgt cct gga act 1008
Glu Phe Ala Lys Val Val Pro Cys Leu Phe Ala Arg Arg Pro Gly Thr
325 330 335

ggt cca att cgc gtc atc act gaa cgc acc gct atg ata act aac ccg 1056
Gly Pro Ile Arg Val Ile Thr Glu Arg Thr Ala Met Ile Thr Asn Pro
340 345 350

ttt cga cgt gca aac cga aaa aaa aaa gtg gag gaa cag cct gtt acg 1104
Phe Arg Arg Ala Asn Arg Lys Lys Lys Val Glu Glu Gln Pro Val Thr
355 360 365

gtg att tct gaa ctt tta cac ccg aca tcc aac gaa gaa taggaagcca 1153
Val Ile Ser Glu Leu Leu His Pro Thr Ser Asn Glu Glu
370 375 380

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acagattcag agagtccact tcaaactgca gtggagccgc agcgcagtat cgtgtatctc 1273

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Met Glu Tyr Phe Arg Pro Phe Phe Ile Ser Met Tyr Cys Ala Val Phe
35 40 45

Leu Val Ala Ser Ser Gly Asn Phe Leu Val Val Tyr Val Val Met Thr
50 55 60

Asn Lys Arg Met Gln Thr Ile Thr Asn Ile Phe Ile Thr Asn Leu Ala
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Val Ser Asp Ile Met Val Asn Phe Thr Ser Leu Trp Leu Thr Pro Thr
85 90 95

Tyr Thr Ser Ile Gly His Trp Ile Phe Gly Gly Gly Leu Cys His Gly
100 105 110

Leu Pro Leu Phe Gln Gly Thr Ser Ile Phe Ile Ser Thr Trp Thr Leu
115 120 125

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# ATTORNEY DOCKET NO. 6223.N

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Ile	Val	Leu	Ile	Trp	Leu	Cys	Ser	Leu	Leu	Leu	Val	Thr	Pro	Tyr	Ala	165	170	175
Ile	Asn	Met	Lys	Leu	Asn	Tyr	Ile	His	Glu	Pro	Cys	Asp	Phe	Leu	Ile	180	185	190
Cys	Ser	Glu	Asp	Trp	Ser	Asn	Ala	Glu	Phe	Arg	Ser	Ile	Phe	Gly	Ile	195	200	205
Val	Val	Met	Ile	Leu	Gln	Phe	Ile	Leu	Pro	Phe	Val	Leu	Ile	Ala	Ile	210	215	220
Ser	Tyr	Ile	Lys	Ile	Trp	Leu	Phe	Leu	Asn	Ser	Arg	Gln	Ser	Met	Thr	225	230	235
Glu	Arg	Lys	Ser	Asp	Ile	Lys	Arg	Lys	Lys	Arg	Leu	Leu	Arg	Met	Leu	245	250	255
Ile	Val	Met	Val	Val	Ile	Phe	Ala	Ile	Cys	Trp	Phe	Pro	Phe	Asn	Leu	260	265	270
Leu	Asn	Cys	Leu	Arg	Asp	Leu	Lys	Leu	Asp	Asn	Phe	Met	Arg	Gly	Tyr	275	280	285
Phe	Ser	Phe	Val	Phe	Leu	Ser	Val	His	Leu	Met	Ser	Met	Thr	Ala	Thr	290	295	300
Ala	Trp	Asn	Pro	Ile	Leu	Tyr	Ala	Phe	Met	Asn	Glu	Thr	Phe	Arg	Glu	305	310	315
Glu	Phe	Ala	Lys	Val	Val	Pro	Cys	Leu	Phe	Ala	Arg	Arg	Pro	Gly	Thr	325	330	335
Gly	Pro	Ile	Arg	Val	Ile	Thr	Glu	Arg	Thr	Ala	Met	Ile	Thr	Asn	Pro	340	345	350
Phe	Arg	Arg	Ala	Asn	Arg	Lys	Lys	Lys	Val	Glu	Glu	Gln	Pro	Val	Thr	355	360	365
Val	Ile	Ser	Glu	Leu	Leu	His	Pro	Thr	Ser	Asn	Glu	Glu				370	375	380

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Pro Asp Met Thr Asn Glu Pro Thr Val Leu Val Thr Phe Ser Leu Leu	
20 25 30	
tat ctt cat att ttt ctt ctt gga atc cta gga aat tcg gct gtt cta	144
Tyr Leu His Ile Phe Leu Leu Gly Ile Leu Gly Asn Ser Ala Val Leu	
35 40 45	
tat ctt aca atg aaa cat cgt caa tta caa act gtt caa aat ata ttt	192
Tyr Leu Thr Met Lys His Arg Gln Leu Gln Thr Val Gln Asn Ile Phe	
50 55 60	
att ttg aac tta tgc gca tcg aat gtt tta atg tgc ttg acg agt ctt	240
Ile Leu Asn Leu Cys Ala Ser Asn Val Leu Met Cys Leu Thr Ser Leu	
65 70 75 80	
cca atc aca ttt atc aca aat gtc tac aaa caa tgg ttc ttc tca tcg	288
Pro Ile Thr Phe Ile Thr Asn Val Tyr Lys Gln Trp Phe Phe Ser Ser	
85 90 95	
cct gtt tgt aaa ctt att cca ttg gtt cag gga gct tca atc ttt gtc	336
Pro Val Cys Lys Leu Ile Pro Leu Val Gln Gly Ala Ser Ile Phe Val	
100 105 110	
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Ser Thr Phe Ser Leu Ser Ala Ile Ala Leu Asp Arg Tyr Asn Leu Val	
115 120 125	
gtt cgt cct cat aaa caa aaa ctc agt tca cga agt gca atg atg att	432
Val Arg Pro His Lys Gln Lys Leu Ser Ser Arg Ser Ala Met Met Ile	
130 135 140	
gct ctt ctc att tgg gtt att agt gta gtt gtt tgt atg cca tat gga	480
Ala Leu Leu Ile Trp Val Ile Ser Val Val Val Cys Met Pro Tyr Gly	
145 150 155 160	
tgg tac atg gat gtg gag aag ctc aat gga tta tgt gga gag tac tgt	528
Trp Tyr Met Asp Val Glu Lys Leu Asn Gly Leu Cys Gly Glu Tyr Cys	
165 170 175	
tct gag cac tgg cca tta gca gaa gta cga aag gga tat act ttt ttg	576
Ser Glu His Trp Pro Leu Ala Glu Val Arg Lys Gly Tyr Thr Phe Leu	
180 185 190	
gtg tta atc act caa ttt ttg ttt cct ttt gct acg atg gct ttt tgc	624
Val Leu Ile Thr Gln Phe Leu Phe Pro Phe Ala Thr Met Ala Phe Cys	
195 200 205	
tat tat aat att ttt tca aga ctc aga caa cga gtg gaa acg aaa ctg	672
Tyr Tyr Asn Ile Phe Ser Arg Leu Arg Gln Arg Val Glu Thr Lys Leu	
210 215 220	
aag aaa tta tca gaa aga tct caa ctt ttg gag aat agt aca aca tgt	720
Lys Lys Leu Ser Glu Arg Ser Gln Leu Leu Glu Asn Ser Thr Thr Cys	
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ggt ctg gaa aac aaa caa aga tta gct gtt ctt gct caa caa aga agg	816
Gly Leu Glu Asn Lys Gln Arg Leu Ala Val Leu Ala Gln Gln Arg Arg	
260 265 270	
aca act act att tta tcg tgc atg gtt ctt ctt ttt gca ttt aca tgg	864
Thr Thr Thr Ile Leu Ser Cys Met Val Leu Leu Phe Ala Phe Thr Trp	
275 280 285	
ctt cca cat aat gtt gtc act ttg atg ata gaa tac gat gga ttc ttt	912
Leu Pro His Asn Val Val Thr Leu Met Ile Glu Tyr Asp Gly Phe Phe	
290 295 300	
ttt cat tct gat gag aca tcg gca acc agt acc gat cat aca tat att	960
Phe His Ser Asp Glu Thr Ser Ala Thr Ser Thr Asp His Thr Tyr Ile	
305 310 315 320	
gtt tca atg act gct cat tta ata tcc atg tta aca aat gta acc aac	1008
Val Ser Met Thr Ala His Leu Ile Ser Met Leu Thr Asn Val Thr Asn	
325 330 335	
cca ttt ctg tat gct tgg ctt aac cca atg ttc aaa gaa atg ctt att	1056
Pro Phe Leu Tyr Ala Trp Leu Asn Pro Met Phe Lys Glu Met Leu Ile	
340 345 350	
aaa act ctc aga ggt gga agt aaa tcc ccg aaa cca gct gac atc aag	1104
Lys Thr Leu Arg Gly Gly Ser Lys Ser Pro Lys Pro Ala Asp Ile Lys	
355 360 365	
caa act tca ttc att cga atg ccg aat agt ggt gcg cca agt caa tct	1152
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Ser Tyr Leu	
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 Tyr Leu His Ile Phe Leu Leu Gly Ile Leu Gly Asn Ser Ala Val Leu  
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 Tyr Leu Thr Met Lys His Arg Gln Leu Gln Thr Val Gln Asn Ile Phe  
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 Ile Leu Asn Leu Cys Ala Ser Asn Val Leu Met Cys Leu Thr Ser Leu  
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Ser Thr Phe Ser Leu Ser Ala Ile Ala Leu Asp Arg Tyr Asn Leu Val  
115 120 125

Val Arg Pro His Lys Gln Lys Leu Ser Ser Arg Ser Ala Met Met Ile  
130 135 140

Ala Leu Leu Ile Trp Val Ile Ser Val Val Val Cys Met Pro Tyr Gly  
145 150 155 160

Trp Tyr Met Asp Val Glu Lys Leu Asn Gly Leu Cys Gly Glu Tyr Cys  
165 170 175

Ser Glu His Trp Pro Leu Ala Glu Val Arg Lys Gly Tyr Thr Phe Leu  
180 185 190

Val Leu Ile Thr Gln Phe Leu Phe Pro Phe Ala Thr Met Ala Phe Cys  
195 200 205

Tyr Tyr Asn Ile Phe Ser Arg Leu Arg Gln Arg Val Glu Thr Lys Leu  
210 215 220

Lys Lys Leu Ser Glu Arg Ser Gln Leu Leu Glu Asn Ser Thr Thr Cys  
225 230 235 240

Gly Thr Thr Asn His Ile Val Ser Ile Asn Ala Glu Ala Val Gln Asn  
245 250 255

Gly Leu Glu Asn Lys Gln Arg Leu Ala Val Leu Ala Gln Gln Arg Arg  
260 265 270

Thr Thr Thr Ile Leu Ser Cys Met Val Leu Leu Phe Ala Phe Thr Trp  
275 280 285

Leu Pro His Asn Val Val Thr Leu Met Ile Glu Tyr Asp Gly Phe Phe  
290 295 300

Phe His Ser Asp Glu Thr Ser Ala Thr Ser Thr Asp His Thr Tyr Ile  
305 310 315 320

Val Ser Met Thr Ala His Leu Ile Ser Met Leu Thr Asn Val Thr Asn  
325 330 335

Pro Phe Leu Tyr Ala Trp Leu Asn Pro Met Phe Lys Glu Met Leu Ile  
340 345 350

Lys Thr Leu Arg Gly Gly Ser Lys Ser Pro Lys Pro Ala Asp Ile Lys  
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Ser Tyr Leu  
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Gln Gln Phe Asn Asp Trp Thr Val Leu Phe Glu Val Arg Leu Gly Tyr	
20 25 30	
tca gta cta tac ttt ctc ata tta ata atc gga ttg gtt gga aat ggg	144
Ser Val Leu Tyr Phe Leu Ile Leu Ile Ile Gly Leu Val Gly Asn Gly	
35 40 45	
cta ttg atc act tca att tta atg cga aag aaa ctt tcc gtg gca aac	192
Leu Leu Ile Thr Ser Ile Leu Met Arg Lys Lys Leu Ser Val Ala Asn	
50 55 60	
ata ttc ttg ata aac ctg gca gtt tct gat ttg ctt ctt tgc atc acg	240
Ile Phe Leu Ile Asn Leu Ala Val Ser Asp Leu Leu Leu Cys Ile Thr	
65 70 75 80	
gcg gtg ccg atc act cca gta ttg gcg ttt atg aag cga tgg ata ttt	288
Ala Val Pro Ile Thr Pro Val Leu Ala Phe Met Lys Arg Trp Ile Phe	
85 90 95	
gga ata att atg tgt aaa ttg gtt cca act tgt cag gcg ttt tcg gtg	336
Gly Ile Ile Met Cys Lys Leu Val Pro Thr Cys Gln Ala Phe Ser Val	
100 105 110	
ctc att tct tca tgg tct ttg tgt tac atc gca att gat aga tat cga	384
Leu Ile Ser Ser Trp Ser Leu Cys Tyr Ile Ala Ile Asp Arg Tyr Arg	
115 120 125	
agt att gtg acg cca ctc cgg gaa cca tgg tct gat agg cat gca agg	432
Ser Ile Val Thr Pro Leu Arg Glu Pro Trp Ser Asp Arg His Ala Arg	
130 135 140	
tgg ctt ctg atg ttc aca tgg gtg gtc gcc ttc ctt gct agt tat cct	480
Trp Leu Leu Met Phe Thr Trp Val Val Ala Phe Leu Ala Ser Tyr Pro	
145 150 155 160	
cta tat tac tca cag aac ttg aaa aca atg gtt att gaa aat gtg aca	528
Leu Tyr Tyr Ser Gln Asn Leu Lys Thr Met Val Ile Glu Asn Val Thr	
165 170 175	
tta tgt gga gat ttt tgc ggc gag ttc aat tgg cag tcg gat gaa ata	576
Leu Cys Gly Asp Phe Cys Gly Glu Phe Asn Trp Gln Ser Asp Glu Ile	
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# ATTORNEY DOCKET NO. 6223.N

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cca gca att atc atg tct ttt tgt tat tta atg att cta caa aag gta	672
Pro Ala Ile Ile Met Ser Phe Cys Tyr Leu Met Ile Leu Gln Lys Val	
210 215 220	
caa acc gac tgg ctt gtc gac gag gga tcc atg ttg act gcc gca caa	720
Gln Thr Asp Trp Leu Val Asp Glu Gly Ser Met Leu Thr Ala Ala Gln	
225 230 235 240	
cag gct caa aca gca gtt cga aag cga cga gtg atg tac gtg ttg att	768
Gln Ala Gln Thr Ala Val Arg Lys Arg Arg Val Met Tyr Val Leu Ile	
245 250 255	
cta atg gtt att gtt ttt atg gct tgc tgg ttc ccg ttg tcc gcc gtg	816
Leu Met Val Ile Val Phe Met Ala Cys Trp Phe Pro Leu Ser Ala Val	
260 265 270	
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Asn Leu Phe Arg Asp Leu Gly Met Arg Phe Glu Phe Cys Gln Thr Val	
275 280 285	
tac aag gtt tta atg atg gac caa atg tat ttc aag ttg ctc aat gtg	912
Tyr Lys Val Leu Met Met Asp Gln Met Tyr Phe Lys Leu Leu Asn Val	
290 295 300	
cac gtc atc gcg atg act tcg atc gta tgg aat ccg gtg ctc tat ttc	960
His Val Ile Ala Met Thr Ser Ile Val Trp Asn Pro Val Leu Tyr Phe	
305 310 315 320	
tgg atg agc aag cgt cat cga cga gcc ctg aaa gac gac atg acg tgg	1008
Trp Met Ser Lys Arg His Arg Arg Ala Leu Lys Asp Asp Met Thr Trp	
325 330 335	
ctc acc aat gct cgc cgt cat aca aac gtc ggc gtt ctg tct cgc ttc	1056
Leu Thr Asn Ala Arg Arg His Thr Asn Val Gly Val Leu Ser Arg Phe	
340 345 350	
aca cct tct cca tca gtt tca gtg gtt tac aga cga act ctg gag cga	1104
Thr Pro Ser Pro Ser Val Ser Val Val Tyr Arg Arg Thr Leu Glu Arg	
355 360 365	
cat cta ggt gtc aat cat ttc cgc cgt ggc aca ctt gcg gac ccg aca	1152
His Leu Gly Val Asn His Phe Arg Arg Gly Thr Leu Ala Asp Pro Thr	
370 375 380	
tgc act tca cgt gaa cga agt ctt ccg cga gaa ctt caa tca aat tgt	1200
Cys Thr Ser Arg Glu Arg Ser Leu Pro Arg Glu Leu Gln Ser Asn Cys	
385 390 395 400	
ttc ctt ctt gtt ccg ctt atg cca tta tgt caa tct gtg acg agg aag	1248
Phe Leu Leu Val Pro Leu Met Pro Leu Cys Gln Ser Val Thr Arg Lys	
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Asn Ser His Leu Ala Ile Asn Arg Asp Gly Ile Val Ile Pro Gln Ala	
420 425 430	

# ATTORNEY DOCKET NO. 6223.N

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 Ser Val Leu Tyr Phe Leu Ile Leu Ile Ile Gly Leu Val Gly Asn Gly  
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 Leu Leu Ile Thr Ser Ile Leu Met Arg Lys Lys Leu Ser Val Ala Asn  
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 Ile Phe Leu Ile Asn Leu Ala Val Ser Asp Leu Leu Leu Cys Ile Thr  
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 Ala Val Pro Ile Thr Pro Val Leu Ala Phe Met Lys Arg Trp Ile Phe  
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 Gly Ile Ile Met Cys Lys Leu Val Pro Thr Cys Gln Ala Phe Ser Val  
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 Leu Ile Ser Ser Trp Ser Leu Cys Tyr Ile Ala Ile Asp Arg Tyr Arg  
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 Ser Ile Val Thr Pro Leu Arg Glu Pro Trp Ser Asp Arg His Ala Arg  
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 Trp Leu Leu Met Phe Thr Trp Val Val Ala Phe Leu Ala Ser Tyr Pro  
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 Leu Tyr Tyr Ser Gln Asn Leu Lys Thr Met Val Ile Glu Asn Val Thr  
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 Leu Cys Gly Asp Phe Cys Gly Glu Phe Asn Trp Gln Ser Asp Glu Ile  
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 Ser Lys Leu Thr Tyr Thr Thr Ser Leu Leu Ile Ile Gln Leu Ile Ile  
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 Pro Ala Ile Ile Met Ser Phe Cys Tyr Leu Met Ile Leu Gln Lys Val  
   210                                  215                                  220  
 Gln Thr Asp Trp Leu Val Asp Glu Gly Ser Met Leu Thr Ala Ala Gln  
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 Gln Ala Gln Thr Ala Val Arg Lys Arg Arg Val Met Tyr Val Leu Ile  
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 Tyr Lys Val Leu Met Met Asp Gln Met Tyr Phe Lys Leu Leu Asn Val  
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 His Val Ile Ala Met Thr Ser Ile Val Trp Asn Pro Val Leu Tyr Phe  
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 Trp Met Ser Lys Arg His Arg Arg Ala Leu Lys Asp Asp Met Thr Trp  
 325 330 335  
 Leu Thr Asn Ala Arg Arg His Thr Asn Val Gly Val Leu Ser Arg Phe  
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 Thr Pro Ser Pro Ser Val Ser Val Val Tyr Arg Arg Thr Leu Glu Arg  
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 His Leu Gly Val Asn His Phe Arg Arg Gly Thr Leu Ala Asp Pro Thr  
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 Cys Thr Ser Arg Glu Arg Ser Leu Pro Arg Glu Leu Gln Ser Asn Cys  
 385 390 395 400  
 Phe Leu Leu Val Pro Leu Met Pro Leu Cys Gln Ser Val Thr Arg Lys  
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 Asn Ser His Leu Ala Ile Asn Arg Asp Gly Ile Val Ile Pro Gln Ala  
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# ATTORNEY DOCKET NO. 6223.N

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gcc tgc ctc agc acc gcc gac ttg tgc ctt atc tgg ttt tgt gtg cct	192
Ala Ser Leu Ser Thr Ala Asp Leu Cys Leu Ile Trp Phe Cys Val Pro	
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Ile Met Phe Met Lys Tyr Met Ser His Thr Trp Ser Met Gly Arg Phe	
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Ala Cys Tyr Ser Val His Tyr Ile Gln Gln Phe Thr Cys Phe Cys Ser	
85 90 95	
gtg ctc acg atg act atg att agt ttt gag agg ttt ctt gca ata gca	336
Val Leu Thr Met Thr Met Ile Ser Phe Glu Arg Phe Leu Ala Ile Ala	
100 105 110	
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Tyr Pro Met Arg Asn Ile Trp Phe Ser Ser Ile Gly Arg Ala Lys Lys	
115 120 125	
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Val Ile Leu Leu Ile Trp Met Ser Ser Ala Val Leu Ala Val Pro Thr	
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Ala Val Arg Met Asp Tyr Glu Thr Asn Leu Ser Leu Ser Gly Gln Arg	
145 150 155 160	
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Val His Trp Cys Arg Arg Arg Phe Pro Ala Gln Phe Leu Gly Tyr Pro	
165 170 175	
agg aca tgc ttg aat aaa gca tat gcc atg tat cag ttg ttg cta ctt	576
Arg Thr Ser Leu Asn Lys Ala Tyr Ala Met Tyr Gln Leu Leu Leu Leu	
180 185 190	
atc ata ttc ccg gtg ctc aca atg tcc ata tgt tat gct cgt gta tct	624
Ile Ile Phe Pro Val Leu Thr Met Ser Ile Cys Tyr Ala Arg Val Ser	
195 200 205	
gca ata gtg tac aag tgc tgc aaa gat cgt gta ata ctt tcc caa gct	672
Ala Ile Val Tyr Lys Ser Ser Lys Asp Arg Val Ile Leu Ser Gln Ala	
210 215 220	
atg gtc gca ttt tca aag gcc gcc act gac gcc gtt acc ttc tcc ggc	720
Met Val Ala Phe Ser Lys Ala Ala Thr Asp Ala Val Thr Phe Ser Gly	
225 230 235 240	
tac tct gca atc ccc atg att aca act tcc cgg aac ttg aaa acc gcc	768
Tyr Ser Ala Ile Pro Met Ile Thr Thr Ser Arg Asn Leu Lys Thr Ala	
245 250 255	
aac acg acc atc aag tcc tgc agt aat cac aga aat aat cgc gtg gca	816
Asn Thr Thr Ile Lys Ser Tyr Ser Asn His Arg Asn Asn Arg Val Ala	
260 265 270	



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gag gcg aat aag aaa cag ata gtt caa atg tta atc tcc atc gtc tgc	864
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atg tac acg gtt tgc tgg ctc cca acg atc gtc gac gag ctt ctg acg	912
Met Tyr Thr Val Cys Trp Leu Pro Thr Ile Val Asp Glu Leu Leu Thr	
290 295 300	
tcc ttc ggg tac att tgt cga aca tca aat acg cag aca ttg aag cat	960
Ser Phe Gly Tyr Ile Cys Arg Thr Ser Asn Thr Gln Thr Leu Lys His	
305 310 315 320	
atg cgg atg gga ttt aat gcg ctg acc tat tgc caa tca tgc att aat	1008
Met Arg Met Gly Phe Asn Ala Leu Thr Tyr Cys Gln Ser Cys Ile Asn	
325 330 335	
cct atc ctg tat gcc ttc att tct cag aat ttc cgg tcc acg ttc aag	1056
Pro Ile Leu Tyr Ala Phe Ile Ser Gln Asn Phe Arg Ser Thr Phe Lys	
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acc gcc tat tcg aga atg aaa agt cgt ctt cag ggc gtg gaa gaa atg	1104
Thr Ala Tyr Ser Arg Met Lys Ser Arg Leu Gln Gly Val Glu Glu Met	
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Arg Ser Arg Met Gly Ser Cys Ser Ser Ala Ser Met Met Ser Thr Arg	
370 375 380	
aac cag cac cga atc tac ggg tcc agc ttc aac aca ctc aca gtg ccc	1200
Asn Gln His Arg Ile Tyr Gly Ser Ser Phe Asn Thr Leu Thr Val Pro	
385 390 395 400	
ggc cgc tcc atg atc act ccg aac atg tca cgc gac gtc tca cag ttg	1248
Gly Arg Ser Met Ile Thr Pro Asn Met Ser Arg Asp Val Ser Gln Leu	
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tca ttg tgc agg ccg acg tcg caa atg tcg ttc tgc cga ccg aag agt	1296
Ser Leu Cys Arg Pro Thr Ser Gln Met Ser Phe Cys Arg Pro Lys Ser	
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Ser Pro Thr Asp Val Ser His Asp Ser Gly Arg Pro Arg Ser Pro Thr	
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gat ctt tcg cag tcg aca aag cct tcg cga cga tcc tcc tct ata aga	1440
Asp Leu Ser Gln Ser Thr Lys Pro Ser Arg Arg Ser Ser Ser Ile Arg	
465 470 475 480	
ccc cgt agc cca aca tcg aca tct caa atg tct acc ata gtc cga tcg	1488
Pro Arg Ser Pro Thr Ser Thr Ser Gln Met Ser Thr Ile Val Arg Ser	
485 490 495	
aga agt cct aca ggc gca tcg gac acc tct tca ttg ttc cca tca aga	1536
Arg Ser Pro Gly Ala Ser Asn Thr Ser Ser Leu Phe Pro Ser Arg	
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ccg cca gca gtg gtt gtc ta 1652  
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 Ala Ser Leu Ser Thr Ala Asp Leu Cys Leu Ile Trp Phe Cys Val Pro  
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 Ile Met Phe Met Lys Tyr Met Ser His Thr Trp Ser Met Gly Arg Phe  
 65 70 75 80  
 Ala Cys Tyr Ser Val His Tyr Ile Gln Gln Phe Thr Cys Phe Cys Ser  
 85 90 95  
 Val Leu Thr Met Thr Met Ile Ser Phe Glu Arg Phe Leu Ala Ile Ala  
 100 105 110  
 Tyr Pro Met Arg Asn Ile Trp Phe Ser Ser Ile Gly Arg Ala Lys Lys  
 115 120 125  
 Val Ile Leu Leu Ile Trp Met Ser Ser Ala Val Leu Ala Val Pro Thr  
 130 135 140  
 Ala Val Arg Met Asp Tyr Glu Thr Asn Leu Ser Leu Ser Gly Gln Arg  
 145 150 155 160  
 Val His Trp Cys Arg Arg Arg Phe Pro Ala Gln Phe Leu Gly Tyr Pro  
 165 170 175  
 Arg Thr Ser Leu Asn Lys Ala Tyr Ala Met Tyr Gln Leu Leu Leu Leu  
 180 185 190  
 Ile Ile Phe Pro Val Leu Thr Met Ser Ile Cys Tyr Ala Arg Val Ser  
 195 200 205  
 Ala Ile Val Tyr Lys Ser Ser Lys Asp Arg Val Ile Leu Ser Gln Ala  
 210 215 220

# ATTORNEY DOCKET NO. 6223.N

Met	Val	Ala	Phe	Ser	Lys	Ala	Ala	Thr	Asp	Ala	Val	Thr	Phe	Ser	Gly	225	230	235	240
Tyr	Ser	Ala	Ile	Pro	Met	Ile	Thr	Thr	Ser	Arg	Asn	Leu	Lys	Thr	Ala	245	250	255	
Asn	Thr	Thr	Ile	Lys	Ser	Tyr	Ser	Asn	His	Arg	Asn	Asn	Arg	Val	Ala	260	265	270	
Glu	Ala	Asn	Lys	Lys	Gln	Ile	Val	Gln	Met	Leu	Ile	Ser	Ile	Val	Cys	275	280	285	
Met	Tyr	Thr	Val	Cys	Trp	Leu	Pro	Thr	Ile	Val	Asp	Glu	Leu	Leu	Thr	290	295	300	
Ser	Phe	Gly	Tyr	Ile	Cys	Arg	Thr	Ser	Asn	Thr	Gln	Thr	Leu	Lys	His	305	310	315	320
Met	Arg	Met	Gly	Phe	Asn	Ala	Leu	Thr	Tyr	Cys	Gln	Ser	Cys	Ile	Asn	325	330	335	
Pro	Ile	Leu	Tyr	Ala	Phe	Ile	Ser	Gln	Asn	Phe	Arg	Ser	Thr	Phe	Lys	340	345	350	
Thr	Ala	Tyr	Ser	Arg	Met	Lys	Ser	Arg	Leu	Gln	Gly	Val	Glu	Glu	Met	355	360	365	
Arg	Ser	Arg	Met	Gly	Ser	Cys	Ser	Ser	Ala	Ser	Met	Met	Ser	Thr	Arg	370	375	380	
Asn	Gln	His	Arg	Ile	Tyr	Gly	Ser	Ser	Phe	Asn	Thr	Leu	Thr	Val	Pro	385	390	395	400
Gly	Arg	Ser	Met	Ile	Thr	Pro	Asn	Met	Ser	Arg	Asp	Val	Ser	Gln	Leu	405	410	415	
Ser	Leu	Cys	Arg	Pro	Thr	Ser	Gln	Met	Ser	Phe	Cys	Arg	Pro	Lys	Ser	420	425	430	
Pro	Met	Ala	Gly	Asp	Ser	Pro	Ser	Thr	Phe	Met	Arg	His	Arg	Pro	Arg	435	440	445	
Ser	Pro	Thr	Asp	Val	Ser	His	Asp	Ser	Gly	Arg	Pro	Arg	Ser	Pro	Thr	450	455	460	
Asp	Leu	Ser	Gln	Ser	Thr	Lys	Pro	Ser	Arg	Arg	Ser	Ser	Ser	Ile	Arg	465	470	475	480
Pro	Arg	Ser	Pro	Thr	Ser	Thr	Ser	Gln	Met	Ser	Thr	Ile	Val	Arg	Ser	485	490	495	
Arg	Ser	Pro	Thr	Gly	Ala	Ser	Asp	Thr	Ser	Ser	Leu	Phe	Pro	Ser	Arg	500	505	510	
Thr	Arg	Ser	Pro	Thr	Leu	Gln	Ser	Asn	Thr	Ser	Gly	Gln	Ser	Met	Glu	515	520	525	
Arg	Thr	Thr	Asp	Arg	Leu	Ser	Val	Arg	Asp	Ala	Val	Arg	Pro	Lys	Thr	530	535	540	
Pro	Pro	Ala	Val	Val	Val											545	550		

ATTORNEY DOCKET NO. 6223.N

<210> 19  
<211> 0  
<212> DNA  
<213> synthetic

<400> 19  
000

<210> 20  
<211> 0  
<212> PRT  
<213> synthetic

<400> 20  
000

<210> 21  
<211> 1130  
<212> DNA  
<213> Homo sapiens

<220>  
<221> CDS  
<222> (1)..(1128)

<220>  
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1 5 10 15  
  
cga gaa gat ttg tca tca agg tgg tac ata atg tta gtg ttt gca ttt 96  
Arg Glu Asp Leu Ser Ser Arg Trp Tyr Ile Met Leu Val Phe Ala Phe  
20 25 30  
  
ctc tac ctg ata atc att gcc gcc gga ata att gga aac tca tgt gtg 144  
Leu Tyr Leu Ile Ile Ile Ala Ala Gly Ile Ile Gly Asn Ser Cys Val  
35 40 45  
  
att ttg gca atc aca agg aac aaa tca ctt caa act gtt ccg aat ctg 192  
Ile Leu Ala Ile Thr Arg Asn Lys Ser Leu Gln Thr Val Pro Asn Leu  
50 55 60  
  
ttt att ctt tct tta tca tgt tct gat att gtg gta tgc tgc aca tct 240  
Phe Ile Leu Ser Leu Ser Cys Ser Asp Ile Val Val Cys Cys Thr Ser  
65 70 75 80  
  
gca aca atc act ccg att act gca ttc aag aaa gaa tgg atc ttt gga 288  
Ala Thr Ile Thr Pro Ile Thr Ala Phe Lys Lys Glu Trp Ile Phe Gly  
85 90 95  
  
gag gct tta tgc cga att gca cca ttc att gct ggt atc agc ctt tgt 336  
Glu Ala Leu Cys Arg Ile Ala Pro Phe Ile Ala Gly Ile Ser Leu Cys  
100 105 110  
  
ctc tca act ttc aca ttg act gca atc tcc atc gac aga tac atc ctg 384  
Phe Ser Thr Phe Thr Leu Thr Ala Ile Ser Ile Asp Arg Tyr Ile Leu

# ATTORNEY DOCKET NO. 6223.N

115	120	125	
att cga ttt ccg atg agg aaa cct att acg cat tat caa gcg gtt gga Ile Arg Phe Pro Met Arg Lys Pro Ile Thr His Tyr Gln Ala Val Gly 130 135 140			432
gtg att gct att att tgc gct ttt gct gca acc atc aca tcc cca ata Val Ile Ala Ile Ile Cys Ala Phe Ala Ala Thr Ile Thr Ser Pro Ile 145 150 155 160			480
atg ttc aag caa aag ctg gga gag ttt gag aat ttt tgt ggg cag tac Met Phe Lys Gln Lys Leu Gly Glu Phe Glu Asn Phe Cys Gly Gln Tyr 165 170 175			528
tgc acg gaa aac tgg gga gcc aat gaa agc cag aga aaa att tat ggt Cys Thr Glu Asn Trp Gly Ala Asn Glu Ser Gln Arg Lys Ile Tyr Gly 180 185 190			576
gca gct ctg atg ttt ctt cag ctc gtc att ccg ctt acc atc atc atc Ala Ala Leu Met Phe Leu Gln Leu Val Ile Pro Leu Thr Ile Ile Ile 195 200 205			624
ata tcc tac act gcg att tct ttg aag atc gga caa agc atg att ctc Ile Ser Tyr Thr Ala Ile Ser Leu Lys Ile Gly Gln Ser Met Ile Leu 210 215 220			672
aaa ggg gcg aaa aag caa aaa aca gac aat tgg gaa atg gaa tta agt Lys Gly Ala Lys Lys Gln Lys Thr Asp Asn Trp Glu Met Glu Leu Ser 225 230 235 240			720
gat caa caa aga atc gct gtg aag aga aga caa aga act aat aga atg Asp Gln Gln Arg Ile Ala Val Lys Arg Arg Gln Arg Thr Asn Arg Met 245 250 255			768
ctt att ggt atg gta gtc gca ttc gct tgc agc tgg att tgg tca gtg Leu Ile Gly Met Val Val Ala Phe Ala Cys Ser Trp Ile Trp Ser Val 260 265 270			816
acg ttc aac att ctg agg gac tat gaa tat ttg cca gag ctc atc aaa Thr Phe Asn Ile Leu Arg Asp Tyr Glu Tyr Leu Pro Glu Leu Ile Lys 275 280 285			864
act caa gaa tat atc ttt gga att gct aca cat tgc att gca atg acc Thr Gln Glu Tyr Ile Phe Gly Ile Ala Thr His Cys Ile Ala Met Thr 290 295 300			912
tca acg gta tgg aac ccg tta ctc tac gca gtg ctc aac ctc caa ctg Ser Thr Val Trp Asn Pro Leu Leu Tyr Ala Val Leu Asn Leu Gln Leu 305 310 315 320			960
cgt gca gca ttc att gac ctg atg cct cac tgg ctt cgt cgt cat tta Arg Ala Ala Phe Ile Asp Leu Met Pro His Trp Leu Arg Arg His Leu 325 330 335			1008
aac ctg gaa gga gac aac agc tct cca ttg ctc aac cat ccg acg atg Asn Leu Glu Gly Asp Asn Ser Ser Pro Leu Leu Asn His Pro Thr Met 340 345 350			1056
aca att aca aac aaa ccg tca aag caa cat aca tta ata cca gca atg Thr Ile Thr Asn Lys Pro Ser Lys Gln His Thr Leu Ile Pro Ala Met 360 365 370 375			1104

# ATTORNEY DOCKET NO. 6223.N

355 360 365 1130  
gac aac cat acg tgt caa caa gtt ta  
Asp Asn His Thr Cys Gln Gln Val  
370 375

<210> 22  
<211> 376  
<212> PRT  
<213> Homo sapiens

<400> 22  
Met Asn Gly Ser Asp Cys Leu Asn Leu Asn Ser Glu Leu Trp Leu Tyr  
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Arg Glu Asp Leu Ser Ser Arg Trp Tyr Ile Met Leu Val Phe Ala Phe  
20 25 30

Leu Tyr Leu Ile Ile Ile Ala Ala Gly Ile Ile Gly Asn Ser Cys Val  
35 40 45

Ile Leu Ala Ile Thr Arg Asn Lys Ser Leu Gln Thr Val Pro Asn Leu  
50 55 60

Phe Ile Leu Ser Leu Ser Cys Ser Asp Ile Val Val Cys Cys Thr Ser  
65 70 75 80

Ala Thr Ile Thr Pro Ile Thr Ala Phe Lys Lys Glu Trp Ile Phe Gly  
85 90 95

Glu Ala Leu Cys Arg Ile Ala Pro Phe Ile Ala Gly Ile Ser Leu Cys  
100 105 110

Phe Ser Thr Phe Thr Leu Thr Ala Ile Ser Ile Asp Arg Tyr Ile Leu  
115 120 125

Ile Arg Phe Pro Met Arg Lys Pro Ile Thr His Tyr Gln Ala Val Gly  
130 135 140

Val Ile Ala Ile Ile Cys Ala Phe Ala Ala Thr Ile Thr Ser Pro Ile  
145 150 155 160

Met Phe Lys Gln Lys Leu Gly Glu Phe Glu Asn Phe Cys Gly Gln Tyr  
165 170 175

Cys Thr Glu Asn Trp Gly Ala Asn Glu Ser Gln Arg Lys Ile Tyr Gly  
180 185 190

Ala Ala Leu Met Phe Leu Gln Leu Val Ile Pro Leu Thr Ile Ile Ile  
195 200 205

Ile Ser Tyr Thr Ala Ile Ser Leu Lys Ile Gly Gln Ser Met Ile Leu  
210 215 220

Lys Gly Ala Lys Lys Gln Lys Thr Asp Asn Trp Glu Met Glu Leu Ser  
225 230 235 240

Asp Gln Gln Arg Ile Ala Val Lys Arg Arg Gln Arg Thr Asn Arg Met  
245 250 255

# ATTORNEY DOCKET NO. 6223.N

Leu Ile Gly Met Val Val Ala Phe Ala Cys Ser Trp Ile Trp Ser Val  
260 265 270

Thr Phe Asn Ile Leu Arg Asp Tyr Glu Tyr Leu Pro Glu Leu Ile Lys  
275 280 285

Thr Gln Glu Tyr Ile Phe Gly Ile Ala Thr His Cys Ile Ala Met Thr  
290 295 300

Ser Thr Val Trp Asn Pro Leu Leu Tyr Ala Val Leu Asn Leu Gln Leu  
305 310 315 320

Arg Ala Ala Phe Ile Asp Leu Met Pro His Trp Leu Arg Arg His Leu  
325 330 335

Asn Leu Glu Gly Asp Asn Ser Ser Pro Leu Leu Asn His Pro Thr Met  
340 345 350

Thr Ile Thr Asn Lys Pro Ser Lys Gln His Thr Leu Ile Pro Ala Met  
355 360 365

Asp Asn His Thr Cys Gln Gln Val  
370 375

<210> 23  
<211> 1125  
<212> DNA  
<213> Homo sapiens

<220>  
<221> CDS  
<222> (1)..(1122)

<220>  
<223> Clone identifier: CEGPCR6

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Met Ile Ile Phe Tyr Leu Tyr Val Ala Thr Gln Val Phe Val Ala Ile  
1 5 10 15

gca ttt gtc ctt ctg atg gca act gca ata att gga aac tct gtc gtg 96  
Ala Phe Val Leu Leu Met Ala Thr Ala Ile Ile Gly Asn Ser Val Val  
20 25 30

atg tgg ata att tat caa cac aaa gta atg cac tac ggc ttc aac tat 144  
Met Trp Ile Ile Tyr Gln His Lys Val Met His Tyr Gly Phe Asn Tyr  
35 40 45

ttt ctt ttc aat atg gca ttc gct gat ctt ttg att gct ctc ttc aat 192  
Phe Leu Phe Asn Met Ala Phe Ala Asp Leu Leu Ile Ala Leu Phe Asn  
50 55 60

gtt ggt act tca tgg acc tat aat tta tac tat gac tgg tgg tat ggt 240  
Val Gly Thr Ser Trp Tyr Tyr Asn Leu Tyr Asp Trp Trp Tyr Gly  
65 70 75 80

gat cta tgt aca ctt act tcc ttc ttc ggt att gca cca act acc gta 288  
Asp Leu Cys Thr Leu Thr Ser Phe Phe Gly Ile Ala Pro Thr Thr Val

# ATTORNEY DOCKET NO. 6223.N

85								90					95					
tcc	gtg	tgc	tca	atg	atg	gct	ctc	agc	tgg	gat	aga	tgt	caa	gca	gtc	336		
Ser	Val	Cys	Ser	Met	Met	Ala	Leu	Ser	Trp	Asp	Arg	Cys	Gln	Ala	Val			
			100					105					110					
gtg	aat	cct	cta	caa	aaa	cgt	cca	cta	tct	cga	aaa	aga	tcc	gtc	att	384		
Val	Asn	Pro	Leu	Gln	Lys	Arg	Pro	Leu	Ser	Arg	Lys	Arg	Ser	Val	Ile			
		115					120					125						
gct	att	ctc	atc	att	tgg	gtt	gtt	tca	acg	gtt	act	gca	ctt	ccg	ttt	432		
Ala	Ile	Leu	Ile	Ile	Trp	Val	Val	Ser	Thr	Val	Thr	Ala	Leu	Pro	Phe			
	130					135					140							
gca	att	gct	gca	tct	gtc	aac	tct	ctc	tac	aca	tat	gac	gtg	gtt	aca	480		
Ala	Ile	Ala	Ala	Ser	Val	Asn	Ser	Leu	Tyr	Thr	Tyr	Asp	Val	Val	Thr			
					150					155					160			
tca	act	gtt	tca	aaa	gct	cac	gtt	tgt	tca	gca	cca	gtt	aat	act	ttc	528		
Ser	Thr	Val	Ser	Lys	Ala	His	Val	Cys	Ser	Ala	Pro	Val	Asn	Thr	Phe			
				165				170						175				
ttt	gaa	aaa	gtg	ctc	ttt	ggg	att	caa	tat	gct	cta	cct	ata	atc	att	576		
Phe	Glu	Lys	Val	Leu	Phe	Gly	Ile	Gln	Tyr	Ala	Leu	Pro	Ile	Ile	Ile			
			180					185					190					
ttg	gga	tca	acg	ttc	aca	cgg	att	gcc	gtt	gca	ttt	cga	gca	aca	aat	624		
Leu	Gly	Ser	Thr	Phe	Thr	Arg	Ile	Ala	Val	Ala	Phe	Arg	Ala	Thr	Asn			
		195					200					205						
gaa	gcc	act	gac	agt	agt	ctg	aag	aac	aat	cac	aca	cgc	gca	aag	agc	672		
Glu	Ala	Thr	Asp	Ser	Ser	Leu	Lys	Asn	Asn	His	Thr	Arg	Ala	Lys	Ser			
	210					215					220							
aag	gca	gta	aaa	atg	ctc	ttc	cta	atg	gtc	gtt	gca	ttc	gtt	gtc	tgc	720		
Lys	Ala	Val	Lys	Met	Leu	Phe	Leu	Met	Val	Val	Ala	Phe	Val	Val	Cys			
	225				230				235					240				
tgg	ctt	cca	tac	cac	att	tat	cac	gca	ttc	gct	ctt	gaa	gaa	ttc	ttc	768		
Trp	Leu	Pro	Tyr	His	Ile	Tyr	His	Ala	Phe	Ala	Leu	Glu	Glu	Phe	Phe			
				245				250					255					
gat	gca	gct	cgt	gga	aaa	tat	gcg	tat	ttg	ttg	att	tac	tgg	att	gca	816		
Asp	Ala	Ala	Arg	Gly	Lys	Tyr	Ala	Tyr	Leu	Leu	Ile	Tyr	Trp	Ile	Ala			
			260				265					270						
atg	tct	agt	tgt	gca	tac	aat	cca	att	att	tat	tgt	ttt	gcc	aac	gaa	864		
Met	Ser	Ser	Cys	Ala	Tyr	Asn	Pro	Ile	Ile	Tyr	Cys	Phe	Ala	Asn	Glu			
		275					280					285						
aga	ttc	cgc	att	ggc	ttc	cgg	tac	gtc	ttc	cga	tgg	att	cca	gtg	att	912		
Arg	Phe	Arg	Ile	Gly	Phe	Arg	Tyr	Val	Phe	Arg	Trp	Ile	Pro	Val	Ile			
	290					295					300							
gac	tgc	aaa	aag	gaa	caa	tat	gaa	tat	tca	caa	tta	ttc	ccg	gat	aaa	960		
Asp	Cys	Lys	Lys	Glu	Gln	Tyr	Glu	Tyr	Ser	Gln	Leu	Phe	Pro	Asp	Lys			
	305				310					315					320			
atg	aga	agt	atg	gct	att	tct	ttg	caa	aaa	gga	aga	gtg	aac	tct	tcc	1008		
Met	Arg	Ser	Met	Ala	Ile	Ser	Leu	Gln	Lys	Gly	Arg	Val	Asn	Ser	Ser			



# ATTORNEY DOCKET NO. 6223.N

325	330	335	
tgt ttg gat aaa aaa gtc aaa gag aat tct tct caa gat ttg gtt tgt			1056
Cys Leu Asp Lys Lys Val Lys Glu Asn Ser Ser Gln Asp Leu Val Cys			
340	345	350	
gtg atg cat tcc gag aaa aat acg aag aaa tat tca aaa gta cat ctt			1104
Val Met His Ser Glu Lys Asn Thr Lys Lys Tyr Ser Lys Val His Leu			
355	360	365	
ctg agt tgc cat gaa cgg tga			1125
Leu Ser Cys His Glu Arg			
370			

<210> 24  
 <211> 374  
 <212> PRT  
 <213> Homo sapiens

<400> 24

Met Ile Ile Phe Tyr Leu Tyr Val Ala Thr Gln Val Phe Val Ala Ile			
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Ala Phe Val Leu Leu Met Ala Thr Ala Ile Ile Gly Asn Ser Val Val			
20	25	30	
Met Trp Ile Ile Tyr Gln His Lys Val Met His Tyr Gly Phe Asn Tyr			
35	40	45	
Phe Leu Phe Asn Met Ala Phe Ala Asp Leu Leu Ile Ala Leu Phe Asn			
50	55	60	
Val Gly Thr Ser Trp Thr Tyr Asn Leu Tyr Tyr Asp Trp Trp Tyr Gly			
65	70	75	80
Asp Leu Cys Thr Leu Thr Ser Phe Phe Gly Ile Ala Pro Thr Thr Val			
85	90	95	
Ser Val Cys Ser Met Met Ala Leu Ser Trp Asp Arg Cys Gln Ala Val			
100	105	110	
Val Asn Pro Leu Gln Lys Arg Pro Leu Ser Arg Lys Arg Ser Val Ile			
115	120	125	
Ala Ile Leu Ile Ile Trp Val Val Ser Thr Val Thr Ala Leu Pro Phe			
130	135	140	
Ala Ile Ala Ala Ser Val Asn Ser Leu Tyr Thr Tyr Asp Val Val Thr			
145	150	155	160
Ser Thr Val Ser Lys Ala His Val Cys Ser Ala Pro Val Asn Thr Phe			
165	170	175	
Phe Glu Lys Val Leu Phe Gly Ile Gln Tyr Ala Leu Pro Ile Ile Ile			
180	185	190	
Leu Gly Ser Thr Phe Thr Arg Ile Ala Val Ala Phe Arg Ala Thr Asn			
195	200	205	
Glu Ala Thr Asp Ser Ser Leu Lys Asn Asn His Thr Arg Ala Lys Ser			
210	215	220	

# ATTORNEY DOCKET NO. 6223.N

Lys Ala Val Lys Met Leu Phe Leu Met Val Val Ala Phe Val Val Cys  
 225 230 235 240  
 Trp Leu Pro Tyr His Ile Tyr His Ala Phe Ala Leu Glu Glu Phe Phe  
 245 250 255  
 Asp Ala Ala Arg Gly Lys Tyr Ala Tyr Leu Leu Ile Tyr Trp Ile Ala  
 260 265 270  
 Met Ser Ser Cys Ala Tyr Asn Pro Ile Ile Tyr Cys Phe Ala Asn Glu  
 275 280 285  
 Arg Phe Arg Ile Gly Phe Arg Tyr Val Phe Arg Trp Ile Pro Val Ile  
 290 295 300  
 Asp Cys Lys Lys Glu Gln Tyr Glu Tyr Ser Gln Leu Phe Pro Asp Lys  
 305 310 315 320  
 Met Arg Ser Met Ala Ile Ser Leu Gln Lys Gly Arg Val Asn Ser Ser  
 325 330 335  
 Cys Leu Asp Lys Lys Val Lys Glu Asn Ser Ser Gln Asp Leu Val Cys  
 340 345 350  
 Val Met His Ser Glu Lys Asn Thr Lys Lys Tyr Ser Lys Val His Leu  
 355 360 365  
 Leu Ser Cys His Glu Arg  
 370

<210> 25  
 <211> 1374  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> CDS  
 <222> (1)..(1371)

<220>  
 <223> Clone identifier: CEGPCR7

<400> 25  
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 Met Glu Val Glu Asn Phe Thr Asp Cys Gln Val Tyr Trp Lys Val Tyr  
 1 5 10 15  
 cca gat cct tct caa agt ata tat gcg ata gtg cca ttt ctg acc gtg 96  
 Pro Asp Pro Ser Gln Ser Ile Tyr Ala Ile Val Pro Phe Leu Thr Val  
 20 25 30  
 tac ctt ttt ctc ttt ttt ctt gga ctc ttt gga aat gtg acc ttg att 144  
 Tyr Leu Phe Leu Phe Phe Leu Gly Leu Phe Gly Asn Val Thr Leu Ile  
 35 40 45  
 tac gta act tgc agc cat aaa gct tta ctg agc gtt caa aac ata ttc 192  
 Tyr Val Thr Cys Ser His Lys Ala Leu Leu Ser Val Gln Asn Ile Phe  
 50 55 60  
 att ctg aac ctg gcg gcg agc gat tgc atg atg tgc ata tta tcg ctt 240  
 Ile Leu Asn Leu Ala Ala Ser Asp Cys Met Met Cys Ile Leu Ser Leu

ATTORNEY DOCKET NO. 6223.N

65	70	75	80	
cca atc act cca atc aca aat gtg tac aaa aac tgg tac ttt gga aat	Pro Ile Thr Pro Ile Thr Asn Val Tyr Lys Asn Trp Tyr Phe Gly Asn	288		
	85 90 95			
cta ctc tgc cat ttg ata cca tgc att caa ggt atc agc att ttc gta	Leu Leu Cys His Leu Ile Pro Cys Ile Gln Gly Ile Ser Ile Phe Val	336		
	100 105 110			
tgc aca ttc agt ctc ggt gcg att gct ttg gat cgg tat atc ctt gta	Cys Thr Phe Ser Leu Gly Ala Ile Ala Leu Asp Arg Tyr Ile Leu Val	384		
	115 120 125			
gta aga cca cat tct aca cca cta tcc caa aga gga gca ttt ctt act	Val Arg Pro His Ser Thr Pro Leu Ser Gln Arg Gly Ala Phe Leu Thr	432		
	130 135 140			
act gtt cta ttg tgg atc ctc tct ttt gtt gta act cta ccc tat gcg	Thr Val Leu Leu Trp Ile Leu Ser Phe Val Val Thr Leu Pro Tyr Ala	480		
	145 150 155 160			
ttc aat atg caa atg att gaa tac aca gaa gag aga ata tgc ggc tac	Phe Asn Met Gln Met Ile Glu Tyr Thr Glu Glu Arg Ile Cys Gly Tyr	528		
	165 170 175			
ttt tgc act gaa aag tgg gaa tct gcc aag tct aga aga gcc tac aca	Phe Cys Thr Glu Lys Trp Glu Ser Ala Lys Ser Arg Arg Ala Tyr Thr	576		
	180 185 190			
atg atc gtg atg ctc gcc caa ttc gtg gtc cca ttc gct gtc atg gcc	Met Ile Val Met Leu Ala Gln Phe Val Val Pro Phe Ala Val Met Ala	624		
	195 200 205			
ttc tgc tat gca aat att gtt tcg gtg ctc agc aag cgt gct cag aca	Phe Cys Tyr Ala Asn Ile Val Ser Val Leu Ser Lys Arg Ala Gln Thr	672		
	210 215 220			
aag ata cgc aaa atg gtg gag aga aca agc gcg ttg gag agc tct tgc	Lys Ile Arg Lys Met Val Glu Arg Thr Ser Ala Leu Glu Ser Ser Cys	720		
	225 230 235 240			
gca ttc ccg tcg cat ggt ctt gaa cag tat gaa aat gag ttg aac gaa	Ala Phe Pro Ser His Gly Leu Glu Gln Tyr Glu Asn Glu Leu Asn Glu	768		
	245 250 255			
ttt cta gac aaa cag gaa aag gag aaa caa cga gtt gta ctt cag aac	Phe Leu Asp Lys Gln Glu Lys Glu Lys Gln Arg Val Val Leu Gln Asn	816		
	260 265 270			
aga aga aca acg tca atc cta gtt acc atg gtt gtc tgg ttt ggg ata	Arg Arg Thr Thr Ser Ile Leu Val Thr Met Val Val Trp Phe Gly Ile	864		
	275 280 285			
act tgg ctg cca cat aac gtc att tct ttg att att gaa tat gat gac	Thr Trp Leu Pro His Asn Val Ile Ser Leu Ile Ile Glu Tyr Asp Asp	912		
	290 295 300			
aca caa tcg ttt ttc cga ctt tat ggc aga gat gat tgc gat atc agt	Thr Gln Ser Phe Phe Arg Leu Tyr Gly Arg Asp Asp Tyr Asp Ile Ser	960		

ATTORNEY DOCKET NO. 6223.N

305	310	315	320	
tat tta ctg aac ctt ttc act cac agt att gcc atg tcg aac aat gtt				1008
Tyr Leu Leu Asn Leu Phe Thr His Ser Ile Ala Met Ser Asn Asn Val				
	325	330	335	
tta aac ccg gta ctc tat gcg tgg ctg aac cca agt ttc cgt caa ctg				1056
Leu Asn Pro Val Leu Tyr Ala Trp Leu Asn Pro Ser Phe Arg Gln Leu				
	340	345	350	
gtc ata aag aca tat ttt gga gac cgg cgt aaa agt gac aga ata atc				1104
Val Ile Lys Thr Tyr Phe Gly Asp Arg Arg Lys Ser Asp Arg Ile Ile				
	355	360	365	
aat caa aca tca gtt tac aaa aca aag atc gtg cat gat acg aag cac				1152
Asn Gln Thr Ser Val Tyr Lys Thr Lys Ile Val His Asp Thr Lys His				
	370	375	380	
ttg aat gga aga gcc aaa att ggc ggt ggt ggt agc cac gag gcg ttg				1200
Leu Asn Gly Arg Ala Lys Ile Gly Gly Gly Gly Ser His Glu Ala Leu				
	385	390	395	400
aag gag agg gag ctg aac tcg tgt tcg gaa aat tta agc tat cat gtg				1248
Lys Glu Arg Glu Leu Asn Ser Cys Ser Glu Asn Leu Ser Tyr His Val				
	405	410	415	
aac ggt cat acg agg act cct aca ccg gaa gtt cag ttg aat gaa gtt				1296
Asn Gly His Thr Arg Thr Pro Thr Pro Glu Val Gln Leu Asn Glu Val				
	420	425	430	
tca agt cct gaa ata agt aaa ctt gtt gct gag ccg gaa gaa ttg atc				1344
Ser Ser Pro Glu Ile Ser Lys Leu Val Ala Glu Pro Glu Glu Leu Ile				
	435	440	445	
gag ttc agc gtc aac gac acg cta gtc tga				1374
Glu Phe Ser Val Asn Asp Thr Leu Val				
	450	455		
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Met Glu Val Glu Asn Phe Thr Asp Cys Gln Val Tyr Trp Lys Val Tyr				
1	5	10	15	
Pro Asp Pro Ser Gln Ser Ile Tyr Ala Ile Val Pro Phe Leu Thr Val				
	20	25	30	
Tyr Leu Phe Leu Phe Phe Leu Gly Leu Phe Gly Asn Val Thr Leu Ile				
	35	40	45	
Tyr Val Thr Cys Ser His Lys Ala Leu Leu Ser Val Gln Asn Ile Phe				
	50	55	60	
Ile Leu Asn Leu Ala Ala Ser Asp Cys Met Met Cys Ile Leu Ser Leu				
	65	70	75	80

# ATTORNEY DOCKET NO. 6223.N

Pro	Ile	Thr	Pro	Ile	Thr	Asn	Val	Tyr	Lys	Asn	Trp	Tyr	Phe	Gly	Asn		
				85					90					95			
Leu	Leu	Cys	His	Leu	Ile	Pro	Cys	Ile	Gln	Gly	Ile	Ser	Ile	Phe	Val		
			100					105					110				
Cys	Thr	Phe	Ser	Leu	Gly	Ala	Ile	Ala	Leu	Asp	Arg	Tyr	Ile	Leu	Val		
		115					120					125					
Val	Arg	Pro	His	Ser	Thr	Pro	Leu	Ser	Gln	Arg	Gly	Ala	Phe	Leu	Thr		
	130					135					140						
Thr	Val	Leu	Leu	Trp	Ile	Leu	Ser	Phe	Val	Val	Thr	Leu	Pro	Tyr	Ala		
145					150					155					160		
Phe	Asn	Met	Gln	Met	Ile	Glu	Tyr	Thr	Glu	Glu	Arg	Ile	Cys	Gly	Tyr		
			165					170					175				
Phe	Cys	Thr	Glu	Lys	Trp	Glu	Ser	Ala	Lys	Ser	Arg	Arg	Ala	Tyr	Thr		
			180					185					190				
Met	Ile	Val	Met	Leu	Ala	Gln	Phe	Val	Val	Pro	Phe	Ala	Val	Met	Ala		
		195					200					205					
Phe	Cys	Tyr	Ala	Asn	Ile	Val	Ser	Val	Leu	Ser	Lys	Arg	Ala	Gln	Thr		
		210				215					220						
Lys	Ile	Arg	Lys	Met	Val	Glu	Arg	Thr	Ser	Ala	Leu	Glu	Ser	Ser	Cys		
225					230					235					240		
Ala	Phe	Pro	Ser	His	Gly	Leu	Glu	Gln	Tyr	Glu	Asn	Glu	Leu	Asn	Glu		
				245					250					255			
Phe	Leu	Asp	Lys	Gln	Glu	Lys	Glu	Lys	Gln	Arg	Val	Val	Leu	Gln	Asn		
			260					265					270				
Arg	Arg	Thr	Thr	Ser	Ile	Leu	Val	Thr	Met	Val	Val	Trp	Phe	Gly	Ile		
		275					280					285					
Thr	Trp	Leu	Pro	His	Asn	Val	Ile	Ser	Leu	Ile	Ile	Glu	Tyr	Asp	Asp		
	290					295					300						
Thr	Gln	Ser	Phe	Phe	Arg	Leu	Tyr	Gly	Arg	Asp	Asp	Tyr	Asp	Ile	Ser		
305					310					315					320		
Tyr	Leu	Leu	Asn	Leu	Phe	Thr	His	Ser	Ile	Ala	Met	Ser	Asn	Asn	Val		
			325						330					335			
Leu	Asn	Pro	Val	Leu	Tyr	Ala	Trp	Leu	Asn	Pro	Ser	Phe	Arg	Gln	Leu		
			340					345					350				
Val	Ile	Lys	Thr	Tyr	Phe	Gly	Asp	Arg	Arg	Lys	Ser	Asp	Arg	Ile	Ile		
		355					360					365					
Asn	Gln	Thr	Ser	Val	Tyr	Lys	Thr	Lys	Ile	Val	His	Asp	Thr	Lys	His		
		370				375					380						
Leu	Asn	Gly	Arg	Ala	Lys	Ile	Gly	Gly	Gly	Gly	Ser	His	Glu	Ala	Leu		
385					390					395					400		
Lys	Glu	Arg	Glu	Leu	Asn	Ser	Cys	Ser	Glu	Asn	Leu	Ser	Tyr	His	Val		
				405					410					415			

# ATTORNEY DOCKET NO. 6223.N

Asn Gly His Thr Arg Thr Pro Thr Pro Glu Val Gln Leu Asn Glu Val  
420 425 430

Ser Ser Pro Glu Ile Ser Lys Leu Val Ala Glu Pro Glu Glu Leu Ile  
435 440 445

Glu Phe Ser Val Asn Asp Thr Leu Val  
450 455

<210> 27

<211> 1146

<212> DNA

<213> Homo sapiens

<220>

<221> CDS

<222> (1)..(1143)

<220>

<223> Clone identifier: CEGPCR8

<400> 27

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Met Asn Thr Ser Phe Val Glu Pro Leu Tyr Ala Asp Val Glu Gln Leu  
1 5 10 15

gaa cca gtc cct cta ctt aga cat tca tat caa cta act gtt ctt tat 96  
Glu Pro Val Pro Leu Leu Arg His Ser Tyr Gln Leu Thr Val Leu Tyr  
20 25 30

aca gtt gca tat gga gct gta ttc ttc act ggt gta ctt gga aac acg 144  
Thr Val Ala Tyr Gly Ala Val Phe Phe Thr Gly Val Leu Gly Asn Thr  
35 40 45

ttt gtt gtc tta gcg gtt tgg gct cat aag aat tta aat ata acc acg 192  
Phe Val Val Leu Ala Val Trp Ala His Lys Asn Leu Asn Ile Thr Thr  
50 55 60

gat tat cta att ttg tct ctt gca ctt gct gat ctg ttt att tta tgg 240  
Asp Tyr Leu Ile Leu Ser Leu Ala Leu Ala Asp Leu Phe Ile Leu Trp  
65 70 75 80

att tgt ctg cca act acg ttg att aat agc att ttc aca gaa tgg ctt 288  
Ile Cys Leu Pro Thr Thr Leu Ile Asn Ser Ile Phe Thr Glu Trp Leu  
85 90 95

tgg ggt caa ttt ttc tgc cga ttg tcc aca tgg gct aac gca tct acg 336  
Trp Gly Gln Phe Phe Cys Arg Leu Ser Thr Trp Ala Asn Ala Ser Thr  
100 105 110

tca ttt gca tca gtt tac acc ttg gtt gca gtg acg gct gat cgt tat 384  
Ser Phe Ala Ser Val Tyr Thr Leu Val Ala Val Thr Ala Asp Arg Tyr  
115 120 125

cta gct att tgc cat acg ttg aaa tac aac act agc tgg gat cga gaa 432  
Leu Ala Ile Cys His Thr Leu Lys Tyr Asn Thr Ser Trp Asp Arg Glu  
130 135 140

tat aca aaa tat gtt ata ttt gct gtt tgg cta gta gct gca ata ttc 480  
Tyr Thr Lys Tyr Val Ile Phe Ala Val Trp Leu Val Ala Ala Ile Phe

# ATTORNEY DOCKET NO. 6223.N

145	150	155	160	
gga ata cct aat tgg tat aac tat gat ttg ata gta tgg caa gaa ggc				528
Gly Ile Pro Asn Trp Tyr Asn Tyr Asp Leu Ile Val Trp Gln Glu Gly	165	170	175	
agt tat ggt tac cga tta tgt acg tca caa acg gat caa aaa tta tat				576
Ser Tyr Gly Tyr Arg Leu Cys Thr Ser Gln Thr Asp Gln Lys Leu Tyr	180	185	190	
ttt tta ttt gtt aac tta ttg ctg gct ttc ata gtt cca ttt ggt ttg				624
Phe Leu Phe Val Asn Leu Leu Leu Ala Phe Ile Val Pro Phe Gly Leu	195	200	205	
att tcg ggt cta tac acg aga ata ttt atc act gta tca aca cat aga				672
Ile Ser Gly Leu Tyr Thr Arg Ile Phe Ile Thr Val Ser Thr His Arg	210	215	220	
agt ctg gca gtt gat gca aga gcc cga gaa gat cga gta aaa cta cga				720
Ser Leu Ala Val Asp Ala Arg Ala Arg Glu Asp Arg Val Lys Leu Arg	225	230	235	240
gtt gcc aca atg atg tta aca gta ata att gta ttt gct tgt tgc tgg				768
Val Ala Thr Met Met Leu Thr Val Ile Ile Val Phe Ala Cys Cys Trp	245	250	255	
tta cct ctc tat tgc atc ttc aca tat ttt ttc ttc ttt gct gat cag				816
Leu Pro Leu Tyr Cys Ile Phe Thr Tyr Phe Phe Phe Phe Ala Asp Gln	260	265	270	
cga tcg gat ctt ttt caa att act tca atg ttg att cgg cca ata ttc				864
Arg Ser Asp Leu Phe Gln Ile Thr Ser Met Leu Ile Arg Pro Ile Phe	275	280	285	
caa tgg atg tca tta cta tcg agt tct tta aat cca ata att tat att				912
Gln Trp Met Ser Leu Leu Ser Ser Ser Leu Asn Pro Ile Ile Tyr Ile	290	295	300	
<del>gca tac agt cac aag tac aga aga gct ttc aaa agt ata tta ctg atg</del>				<del>960</del>
<del>Ala Tyr Ser His Lys Tyr Arg Arg Ala Phe Lys Ser Ile Leu Leu Met</del>	<del>305</del>	<del>310</del>	<del>315</del>	<del>320</del>
cca tgt aag aca aga tac gaa aga gtc cga agc aca ata ctc cgt cgt				1008
Pro Cys Lys Thr Arg Tyr Glu Arg Val Arg Ser Thr Ile Leu Arg Arg	325	330	335	
cac tct cgt ggc ttc aaa tca act gca aca att tca atg tct aat ttt				1056
His Ser Arg Gly Phe Lys Ser Thr Ala Thr Ile Ser Met Ser Asn Phe	340	345	350	
gga act gaa cca aca aat tta ggt gga gca tct agt tta ctt att gaa				1104
Gly Thr Glu Pro Thr Asn Leu Gly Gly Ala Ser Ser Leu Leu Ile Glu	355	360	365	
cta gat gga aaa cag gta gaa aga tct act tct gat tgt taa				1146
Leu Asp Gly Lys Gln Val Glu Arg Ser Thr Ser Asp Cys	370	375	380	

<210> 28

# ATTORNEY DOCKET NO. 6223.N

<211> 381

<212> PRT

<213> Homo sapiens

<400> 28

Met Asn Thr Ser Phe Val Glu Pro Leu Tyr Ala Asp Val Glu Gln Leu  
1 5 10 15

Glu Pro Val Pro Leu Leu Arg His Ser Tyr Gln Leu Thr Val Leu Tyr  
20 25 30

Thr Val Ala Tyr Gly Ala Val Phe Phe Thr Gly Val Leu Gly Asn Thr  
35 40 45

Phe Val Val Leu Ala Val Trp Ala His Lys Asn Leu Asn Ile Thr Thr  
50 55 60

Asp Tyr Leu Ile Leu Ser Leu Ala Leu Ala Asp Leu Phe Ile Leu Trp  
65 70 75 80

Ile Cys Leu Pro Thr Leu Ile Asn Ser Ile Phe Thr Glu Trp Leu  
85 90 95

Trp Gly Gln Phe Phe Cys Arg Leu Ser Thr Trp Ala Asn Ala Ser Thr  
100 105 110

Ser Phe Ala Ser Val Tyr Thr Leu Val Ala Val Thr Ala Asp Arg Tyr  
115 120 125

Leu Ala Ile Cys His Thr Leu Lys Tyr Asn Thr Ser Trp Asp Arg Glu  
130 135 140

Tyr Thr Lys Tyr Val Ile Phe Ala Val Trp Leu Val Ala Ala Ile Phe  
145 150 155 160

Gly Ile Pro Asn Trp Tyr Asn Tyr Asp Leu Ile Val Trp Gln Glu Gly  
165 170 175

Ser Tyr Gly Tyr Arg Leu Cys Thr Ser Gln Thr Asp Gln Lys Leu Tyr  
180 185 190

Phe Leu Phe Val Asn Leu Leu Leu Ala Phe Ile Val Pro Phe Gly Leu  
195 200 205

Ile Ser Gly Leu Tyr Thr Arg Ile Phe Ile Thr Val Ser Thr His Arg  
210 215 220

Ser Leu Ala Val Asp Ala Arg Ala Arg Glu Asp Arg Val Lys Leu Arg  
225 230 235 240

Val Ala Thr Met Met Leu Thr Val Ile Ile Val Phe Ala Cys Cys Trp  
245 250 255

Leu Pro Leu Tyr Cys Ile Phe Thr Tyr Phe Phe Phe Phe Ala Asp Gln  
260 265 270

Arg Ser Asp Leu Phe Gln Ile Thr Ser Met Leu Ile Arg Pro Ile Phe  
275 280 285

Gln Trp Met Ser Leu Leu Ser Ser Ser Leu Asn Pro Ile Ile Tyr Ile  
290 295 300



# ATTORNEY DOCKET NO. 6223.N

Ala Tyr Ser His Lys Tyr Arg Arg Ala Phe Lys Ser Ile Leu Leu Met  
 305 310 315 320

Pro Cys Lys Thr Arg Tyr Glu Arg Val Arg Ser Thr Ile Leu Arg Arg  
 325 330 335

His Ser Arg Gly Phe Lys Ser Thr Ala Thr Ile Ser Met Ser Asn Phe  
 340 345 350

Gly Thr Glu Pro Thr Asn Leu Gly Gly Ala Ser Ser Leu Leu Ile Glu  
 355 360 365

Leu Asp Gly Lys Gln Val Glu Arg Ser Thr Ser Asp Cys  
 370 375 380

<210> 29

<211> 1473

<212> DNA

<213> Homo sapiens

<220>

<221> CDS

<222> (1)..(1470)

<220>

<223> Clone identifier: CEGPCR9

<400> 29

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Met Glu Val Lys Asp Ile Asp Asn Tyr Cys Asp Arg Gly Ile Ser Pro	
1 5 10 15	
aat gca tcc aat tat ctc acg tac cca ttt gac ggg ctc tgt cta cag	96
Asn Ala Ser Asn Tyr Leu Thr Tyr Pro Phe Asp Gly Leu Cys Leu Gln	
20 25 30	
aaa ttt ttt tat caa ctc caa act tct ttg cga agg ttc act cct tac	144
Lys Phe Phe Tyr Gln Leu Gln Thr Ser Leu Arg Arg Phe Thr Pro Tyr	
35 40 45	
gaa gaa atc att tac aca aca gtt tac atc att atc tct gta gca gct	192
Glu Glu Ile Ile Tyr Thr Thr Val Tyr Ile Ile Ile Ser Val Ala Ala	
50 55 60	
gtt att gga aat gga ttg gtg ata atg gct gta gta cgg aaa aag aca	240
Val Ile Gly Asn Gly Leu Val Ile Met Ala Val Val Arg Lys Lys Thr	
65 70 75 80	
atg aga aca aac aga aat gtt ttg att tta aat ctc gcg ctt tca aac	288
Met Arg Thr Asn Arg Asn Val Leu Ile Leu Asn Leu Ala Leu Ser Asn	
85 90 95	
ttg ata ctc gcc atc acc aac atc cca ttt cta tgg ctt ccg tca att	336
Leu Ile Leu Ala Ile Thr Asn Ile Pro Phe Leu Trp Leu Pro Ser Ile	
100 105 110	
gat ttc gaa ttt ccg tac tct cga ttt ttc tgc aaa ttt gcc aat gtg	384
Asp Phe Glu Phe Pro Tyr Ser Arg Phe Phe Cys Lys Phe Ala Asn Val	
115 120 125	
ctt ccg ggt agt aat atc tac tgc tca act tta acc atc tcg gtg atg	432

# ATTORNEY DOCKET NO. 6223.N

Leu	Pro	Gly	Ser	Asn	Ile	Tyr	Cys	Ser	Thr	Leu	Thr	Ile	Ser	Val	Met	
130						135					140					
gca	att	gat	aga	tat	tat	tcg	gtg	aag	aaa	ttg	aaa	att	gca	tca	aat	480
Ala	Ile	Asp	Arg	Tyr	Tyr	Ser	Val	Lys	Lys	Leu	Lys	Ile	Ala	Ser	Asn	
145					150					155					160	
cgt	aaa	caa	tgt	ttc	cat	gct	gtt	ttg	gtt	tca	ttg	gct	att	tgg	att	528
Arg	Lys	Gln	Cys	Phe	His	Ala	Val	Leu	Val	Ser	Leu	Ala	Ile	Trp	Ile	
				165					170					175		
gtg	tca	ttc	atc	ctc	tcg	tta	cct	ctg	ctc	ttg	tac	tat	gaa	acc	tca	576
Val	Ser	Phe	Ile	Leu	Ser	Leu	Pro	Leu	Val	Leu	Tyr	Tyr	Glu	Thr	Ser	
			180					185					190			
atg	ctc	tac	gtc	atg	aga	gaa	att	cga	gtt	gtt	gat	caa	agc	ggg	cag	624
Met	Leu	Tyr	Val	Met	Arg	Glu	Ile	Arg	Val	Val	Asp	Gln	Ser	Gly	Gln	
		195					200					205				
gaa	gtc	atc	cga	agc	tac	gga	tgg	aga	cag	tgc	cgt	cta	gtt	tct	gcc	672
Glu	Val	Ile	Arg	Ser	Tyr	Gly	Trp	Arg	Gln	Cys	Arg	Leu	Val	Ser	Ala	
	210					215					220					
gga	cga	tta	ccg	gac	atc	acc	caa	agc	atc	cag	ttg	ctc	atg	tct	att	720
Gly	Arg	Leu	Pro	Asp	Ile	Thr	Gln	Ser	Ile	Gln	Leu	Leu	Met	Ser	Ile	
225					230					235					240	
ctt	caa	gtc	gct	ttc	cta	tac	atc	gtt	cca	ctc	ttt	gtt	ctt	tca	atc	768
Leu	Gln	Val	Ala	Phe	Leu	Tyr	Ile	Val	Pro	Leu	Phe	Val	Leu	Ser	Ile	
				245					250					255		
ttc	aac	gtg	aaa	ctc	acc	cgg	ttt	tta	aaa	aca	aat	gcc	aac	aaa	atg	816
Phe	Asn	Val	Lys	Leu	Thr	Arg	Phe	Leu	Lys	Thr	Asn	Ala	Asn	Lys	Met	
			260					265					270			
agc	aaa	act	cgt	gct	ccg	cca	aaa	cga	ttt	gac	aga	tcc	gat	agc	cac	864
Ser	Lys	Thr	Arg	Ala	Pro	Pro	Lys	Arg	Phe	Asp	Arg	Ser	Asp	Ser	His	
		275					280					285				
cat	aat	tcg	ttg	aaa	aat	aac	aac	aac	cac	acg	tct	tct	cta	cgt	tcg	912
His	Asn	Ser	Leu	Lys	Asn	Asn	Asn	Asn	His	Thr	Ser	Ser	Leu	Arg	Ser	
	290				295						300					
cca	tca	atg	ccc	tca	atc	aga	agt	tcg	ata	acg	gag	aga	aac	aag	acg	960
Pro	Ser	Met	Pro	Ser	Ile	Arg	Ser	Ser	Ile	Thr	Glu	Arg	Asn	Lys	Thr	
305					310					315					320	
aat	cag	aga	aca	aac	aga	act	act	tcg	tta	ctg	att	gca	atg	gcc	gga	1008
Asn	Gln	Arg	Thr	Asn	Arg	Thr	Thr	Ser	Leu	Leu	Ile	Ala	Met	Ala	Gly	
				325					330					335		
agc	tat	gcg	gct	ctt	tgg	ttt	cca	ttc	act	ctc	atc	act	ttt	ttg	ata	1056
Ser	Tyr	Ala	Ala	Leu	Trp	Phe	Pro	Phe	Thr	Leu	Ile	Thr	Phe	Leu	Ile	
			340					345					350			
gac	ttc	gag	ttg	atc	atc	aat	caa	gac	tac	gtg	aac	ttg	gta	gaa	cga	1104
Asp	Phe	Glu	Leu	Ile	Ile	Asn	Gln	Asp	Tyr	Val	Asn	Leu	Val	Glu	Arg	
		355					360					365				
att	gac	caa	acc	tgc	aaa	atg	gta	tcc	atg	ctg	tcc	att	tgt	gtg	aac	1152

# ATTORNEY DOCKET NO. 6223.N

Ile	Asp	Gln	Thr	Cys	Lys	Met	Val	Ser	Met	Leu	Ser	Ile	Cys	Val	Asn		
370						375					380						
cca	ttt	ctc	tac	gga	ttc	cta	aat	acc	aat	ttt	cga	cac	gaa	ttt	tcc	1200	
Pro	Phe	Leu	Tyr	Gly	Phe	Leu	Asn	Thr	Asn	Phe	Arg	His	Glu	Phe	Ser		
385					390					395					400		
gac	atc	tac	tac	cga	tac	att	cgc	tgt	gaa	aca	aag	agt	cag	cca	gcc	1248	
Asp	Ile	Tyr	Tyr	Arg	Tyr	Ile	Arg	Cys	Glu	Thr	Lys	Ser	Gln	Pro	Ala		
				405					410					415			
ggc	cga	ttc	cat	cat	gat	gta	tca	tca	atc	gct	cac	cat	aga	caa	gac	1296	
Gly	Arg	Phe	His	His	Asp	Val	Ser	Ser	Ile	Ala	His	His	Arg	Gln	Asp		
			420					425					430				
tct	gtt	tac	aat	gat	gag	gca	aca	ctt	ttg	act	aca	ggg	cgt	cag	agt	1344	
Ser	Val	Tyr	Asn	Asp	Glu	Ala	Thr	Leu	Leu	Thr	Thr	Gly	Arg	Gln	Ser		
		435					440					445					
aat	ggt	aaa	gat	ggg	agc	tcg	tct	cca	ata	gga	ttc	cgc	tct	agc	gtc	1392	
Asn	Gly	Lys	Asp	Gly	Ser	Ser	Ser	Pro	Ile	Gly	Phe	Arg	Ser	Ser	Val		
	450					455					460						
cgt	gtt	tgc	tcg	ggt	caa	aca	aaa	atg	att	gga	gat	cgc	att	gta	ttg	1440	
Arg	Val	Cys	Ser	Gly	Gln	Thr	Lys	Met	Ile	Gly	Asp	Arg	Ile	Val	Leu		
465					470					475					480		
gac	gat	gat	atc	gag	aaa	gat	agt	ttt	gtc	taa						1473	
Asp	Asp	Asp	Ile	Glu	Lys	Asp	Ser	Phe	Val								
				485					490								
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<212> PRT																	
<213> Homo sapiens																	
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Met	Glu	Val	Lys	Asp	Ile	Asp	Asn	Tyr	Cys	Asp	Arg	Gly	Ile	Ser	Pro		
1				5					10					15			
Asn	Ala	Ser	Asn	Tyr	Leu	Thr	Tyr	Pro	Phe	Asp	Gly	Leu	Cys	Leu	Gln		
			20					25					30				
Lys	Phe	Phe	Tyr	Gln	Leu	Gln	Thr	Ser	Leu	Arg	Arg	Phe	Thr	Pro	Tyr		
		35					40					45					
Glu	Glu	Ile	Ile	Tyr	Thr	Thr	Val	Tyr	Ile	Ile	Ile	Ser	Val	Ala	Ala		
	50					55					60						
Val	Ile	Gly	Asn	Gly	Leu	Val	Ile	Met	Ala	Val	Val	Arg	Lys	Lys	Thr		
65					70					75					80		
Met	Arg	Thr	Asn	Arg	Asn	Val	Leu	Ile	Leu	Asn	Leu	Ala	Leu	Ser	Asn		
			85						90					95			
Leu	Ala	Leu	Ala	Ile	Thr	Asn	Ile	Pro	Phe	Leu	Trp	Leu	Pro	Ser	Ile		
			100					105					110				
Asp	Phe	Glu	Phe	Pro	Tyr	Ser	Arg	Phe	Phe	Cys	Lys	Phe	Ala	Asn	Val		

ATTORNEY DOCKET NO. 6223.N

115					120					125					
Leu	Pro	Gly	Ser	Asn	Ile	Tyr	Cys	Ser	Thr	Leu	Thr	Ile	Ser	Val	Met
130						135					140				
Ala	Ile	Asp	Arg	Tyr	Tyr	Ser	Val	Lys	Lys	Leu	Lys	Ile	Ala	Ser	Asn
145					150					155					160
Arg	Lys	Gln	Cys	Phe	His	Ala	Val	Leu	Val	Ser	Leu	Ala	Ile	Trp	Ile
				165					170					175	
Val	Ser	Phe	Ile	Leu	Ser	Leu	Pro	Leu	Leu	Tyr	Tyr	Glu	Thr	Ser	
			180					185				190			
Met	Leu	Tyr	Val	Met	Arg	Glu	Ile	Arg	Val	Val	Asp	Gln	Ser	Gly	Gln
		195					200					205			
Glu	Val	Ile	Arg	Ser	Tyr	Gly	Trp	Arg	Gln	Cys	Arg	Leu	Val	Ser	Ala
	210					215					220				
Gly	Arg	Leu	Pro	Asp	Ile	Thr	Gln	Ser	Ile	Gln	Leu	Leu	Met	Ser	Ile
225					230					235					240
Leu	Gln	Val	Ala	Phe	Leu	Tyr	Ile	Val	Pro	Leu	Phe	Val	Leu	Ser	Ile
				245					250					255	
Phe	Asn	Val	Lys	Leu	Thr	Arg	Phe	Leu	Lys	Thr	Asn	Ala	Asn	Lys	Met
			260					265					270		
Ser	Lys	Thr	Arg	Ala	Pro	Pro	Lys	Arg	Phe	Asp	Arg	Ser	Asp	Ser	His
			275				280					285			
His	Asn	Ser	Leu	Lys	Asn	Asn	Asn	Asn	His	Thr	Ser	Ser	Leu	Arg	Ser
	290					295					300				
Pro	Ser	Met	Pro	Ser	Ile	Arg	Ser	Ser	Ile	Thr	Glu	Arg	Asn	Lys	Thr
305					310					315					320
Asn	Gln	Arg	Thr	Asn	Arg	Thr	Thr	Ser	Leu	Leu	Ile	Ala	Met	Ala	Gly
				325					330					335	
Ser	Tyr	Ala	Ala	Leu	Trp	Phe	Pro	Phe	Thr	Leu	Ile	Thr	Phe	Leu	Ile
			340					345					350		
Asp	Phe	Glu	Leu	Ile	Ile	Asn	Gln	Asp	Tyr	Val	Asn	Leu	Val	Glu	Arg
		355					360					365			
Ile	Asp	Gln	Thr	Cys	Lys	Met	Val	Ser	Met	Leu	Ser	Ile	Cys	Val	Asn
	370					375					380				
Pro	Phe	Leu	Tyr	Gly	Phe	Leu	Asn	Thr	Asn	Phe	Arg	His	Glu	Phe	Ser
385					390					395					400
Asp	Ile	Tyr	Tyr	Arg	Tyr	Ile	Arg	Cys	Glu	Thr	Lys	Ser	Gln	Pro	Ala
				405					410					415	
Gly	Arg	Phe	His	His	Asp	Val	Ser	Ser	Ile	Ala	His	His	Arg	Gln	Asp
			420					425					430		
Ser	Val	Tyr	Asn	Asp	Glu	Ala	Thr	Leu	Leu	Thr	Thr	Gly	Arg	Gln	Ser
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# ATTORNEY DOCKET NO. 6223.N

Asn Gly Lys Asp Gly Ser Ser Ser Pro Ile Gly Phe Arg Ser Ser Val  
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 Arg Val Cys Ser Gly Gln Thr Lys Met Ile Gly Asp Arg Ile Val Leu  
 465 470 475 480  
 Asp Asp Asp Ile Glu Lys Asp Ser Phe Val  
 485 490

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 1 5 10 15  
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 Ile Asp Ile Gly Ile His Met Lys Thr Leu Leu Ala Val Gly Tyr Gly  
 20 25 30  
 ttg gtg gga gcc ctg agc tta gtt gga aat ctt gct gta ttg ctc att 144  
 Leu Val Gly Ala Leu Ser Leu Val Gly Asn Leu Ala Val Leu Leu Ile  
 35 40 45  
 gtg ata tgc agg aga gaa atg caa aca gtc acc aac att ttt ata agt 192  
 Val Ile Cys Arg Arg Glu Met Gln Thr Val Thr Asn Ile Phe Ile Ser  
 50 55 60  
 agc gtc tcc gcg gct gac ttg gta ata aca agt ttc tcc tta tgg gcg 240  
 Ser Val Ser Ala Ala Asp Leu Val Ile Thr Ser Phe Ser Leu Trp Ala  
 65 70 75 80  
 acc cca tta gcc tat tat caa cgg gta tgg cat ttc gga aag tat atg 288  
 Thr Pro Leu Ala Tyr Tyr Gln Arg Val Trp His Phe Gly Lys Tyr Met  
 85 90 95  
 tgc tat atg gtt tcc atc ata caa ggc tta tcc ctc atg tgg gta cca 336  
 Cys Tyr Met Val Ser Ile Ile Gln Gly Leu Ser Leu Met Trp Val Pro  
 100 105 110  
 ctg acc cta gca gca gtt gca tta gat cgc tac tct cta gtt gct tct 384  
 Leu Thr Leu Ala Ala Val Ala Leu Asp Arg Tyr Ser Leu Val Ala Ser  
 115 120 125  
 ccg ttc cgt cag cca atg tct aaa aag act tgc ttg ctg atc atc gct 432  
 Pro Phe Arg Gln Pro Met Ser Lys Lys Thr Cys Leu Leu Ile Ile Ala  
 130 135 140  
 gga atc tgg atg gga ggg ttt gca gtt ttg tcg cca atg att cgg atg 480  
 Gly Ile Trp Met Gly Gly Phe Ala Val Leu Ser Pro Met Ile Arg Met  
 145 150 155 160

# ATTORNEY DOCKET NO. 6223.N

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Val Asp Phe Val Asp Ser Tyr Gly Pro Cys His Phe Cys Leu Glu Ser	
165 170 175	
tgg gac cac gac aaa caa cac tac cga ctt ttc tac gga ctc tcg gtg	576
Trp Asp His Asp Lys Gln His Tyr Arg Leu Phe Tyr Gly Leu Ser Val	
180 185 190	
ctc gtg atc cgc tcc gca att cca ctt gtt ctc att tcc ctg tgc cac	624
Leu Val Ile Arg Ser Ala Ile Pro Leu Val Leu Ile Ser Leu Cys His	
195 200 205	
tgg aga atc gca gtt att ttg aac acg cag acg gag aaa ttc caa aca	672
Trp Arg Ile Ala Val Ile Leu Asn Thr Gln Thr Glu Lys Phe Gln Thr	
210 215 220	
tta cgt agt gcc agc aca gtc acc caa tcg act gac atc cgc cgt aaa	720
Leu Arg Ser Ala Ser Thr Val Thr Gln Ser Thr Asp Ile Arg Arg Lys	
225 230 235 240	
caa cgt ctt cag act ctc tta ttg gca atg gtg gtc ata ttt gcc gtg	768
Gln Arg Leu Gln Thr Leu Leu Leu Ala Met Val Val Ile Phe Ala Val	
245 250 255	
tcc agt ctc cca ctg gac ctt tca aat gtt ctt caa gat ttg atc gta	816
Ser Ser Leu Pro Leu Asp Leu Ser Asn Val Leu Gln Asp Leu Ile Val	
260 265 270	
gtg tac cag gtt cga cct gtc ccc gac aac gtt cgc cat ttt atc ttc	864
Val Tyr Gln Val Arg Pro Val Pro Asp Asn Val Arg His Phe Ile Phe	
275 280 285	
ttc ttt tgc cat tgg acc gca atg gca gga aca ctt ctc aac ccg tta	912
Phe Phe Cys His Trp Thr Ala Met Ala Gly Thr Leu Leu Asn Pro Leu	
290 295 300	
gtc tac gcg tac tac aac gaa aac ttc cgg cgt cag att caa aca tgc	960
Val Tyr Ala Tyr Tyr Asn Glu Asn Phe Arg Arg Gln Ile Gln Thr Cys	
305 310 315 320	
ttt gga gaa atg cgt gga cag gga gag ttc aag cgg ggg cta tac tct	1008
Phe Gly Glu Met Arg Gly Gln Gly Glu Phe Lys Arg Gly Leu Tyr Ser	
325 330 335	
att gtc tcc ggc aga tac tcc tac cga gca gac gac gag gaa aat cat	1056
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340 345 350	
cac aga caa aac aca cgt atc gaa ctg gct aac aat caa act ggt gat	1104
His Arg Gln Asn Thr Arg Ile Glu Leu Ala Asn Asn Gln Thr Gly Asp	
355 360 365	
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# ATTORNEY DOCKET NO. 6223.N

<213> Homo sapiens

<400> 32

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Leu Val Gly Ala Leu Ser Leu Val Gly Asn Leu Ala Val Leu Leu Ile
          35           40           45

Val Ile Cys Arg Arg Glu Met Gln Thr Val Thr Asn Ile Phe Ile Ser
          50           55           60

Ser Val Ser Ala Ala Asp Leu Val Ile Thr Ser Phe Ser Leu Trp Ala
          65           70           75           80

Thr Pro Leu Ala Tyr Tyr Gln Arg Val Trp His Phe Gly Lys Tyr Met
          85           90           95

Cys Tyr Met Val Ser Ile Ile Gln Gly Leu Ser Leu Met Trp Val Pro
          100          105          110

Leu Thr Leu Ala Ala Val Ala Leu Asp Arg Tyr Ser Leu Val Ala Ser
          115          120          125

Pro Phe Arg Gln Pro Met Ser Lys Lys Thr Cys Leu Leu Ile Ile Ala
          130          135          140

Gly Ile Trp Met Gly Gly Phe Ala Val Leu Ser Pro Met Ile Arg Met
          145          150          155          160

Val Asp Phe Val Asp Ser Tyr Gly Pro Cys His Phe Cys Leu Glu Ser
          165          170          175

Trp Asp His Asp Lys Gln His Tyr Arg Leu Phe Tyr Gly Leu Ser Val
          180          185          190

Leu Val Ile Arg Ser Ala Ile Pro Leu Val Leu Ile Ser Leu Cys His
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Trp Arg Ile Ala Val Ile Leu Asn Thr Gln Thr Glu Lys Phe Gln Thr
          210          215          220

Leu Arg Ser Ala Ser Thr Val Thr Gln Ser Thr Asp Ile Arg Arg Lys
          225          230          235          240

Gln Arg Leu Gln Thr Leu Leu Leu Ala Met Val Val Ile Phe Ala Val
          245          250          255

Ser Ser Leu Pro Leu Asp Leu Ser Asn Val Leu Gln Asp Leu Ile Val
          260          265          270

Val Tyr Gln Val Arg Pro Val Pro Asp Asn Val Arg His Phe Ile Phe
          275          280          285

Phe Phe Cys His Trp Thr Ala Met Ala Gly Thr Leu Leu Asn Pro Leu
          290          295          300

Val Tyr Ala Tyr Tyr Asn Glu Asn Phe Arg Arg Gln Ile Gln Thr Cys
          305          310          315          320

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# ATTORNEY DOCKET NO. 6223.N

Phe Gly Glu Met Arg Gly Gln Gly Glu Phe Lys Arg Gly Leu Tyr Ser  
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Ile Val Ser Gly Arg Tyr Ser Tyr Arg Ala Asp Asp Glu Glu Asn His  
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His Arg Gln Asn Thr Arg Ile Glu Leu Ala Asn Asn Gln Thr Gly Asp  
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Ile Glu Val Leu Arg Thr Asp Leu  
370 375

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tta gct gcc gat aaa gtt cta aac ggt tca ctg atc aac tgt aca ttc 96  
Leu Ala Ala Asp Lys Val Leu Asn Gly Ser Leu Ile Asn Cys Thr Phe  
20 25 30

caa tcg ttt tac gat caa atg tat caa aca cac gga gta tac ttc ata 144  
Gln Ser Phe Tyr Asp Gln Met Tyr Gln Thr His Gly Val Tyr Phe Ile  
35 40 45

ttt gaa cca act ccg ttc gtt cat cca att gtt tca cag att ttc tat 192  
Phe Glu Pro Thr Pro Phe Val His Pro Ile Val Ser Gln Ile Phe Tyr  
50 55 60

gga atc ctg ttc aca cta aca ata ttt ctg gcg tta atg ggc aat ttt 240  
Gly Ile Leu Phe Thr Leu Thr Ile Phe Leu Ala Leu Met Gly Asn Phe  
65 70 75 80

aca gtg atg tgg ata atc ctg tac cac cgt caa atg cga agc gtc aca 288  
Thr Val Met Trp Ile Ile Leu Tyr His Arg Gln Met Arg Ser Val Thr  
85 90 95

aat tac tat ctg ttc aac ttg gca gtg gcg gat gcc tcg att tca gtg 336  
Asn Tyr Tyr Leu Phe Asn Leu Ala Val Ala Asp Ala Ser Ile Ser Val  
100 105 110

ttc aac acg gga ttc tca tgg tct tat aat tat tat tat gtt tgg aaa 384  
Phe Asn Thr Gly Phe Ser Trp Ser Tyr Asn Tyr Tyr Tyr Val Trp Lys  
115 120 125

ttc gga agc ttt tac tgt cga ata aac aat ttg atg gga ata act ccg 432  
Phe Gly Ser Phe Tyr Cys Arg Ile Asn Asn Leu Met Gly Ile Thr Pro  
130 135 140



# ATTORNEY DOCKET NO. 6223.N

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Ile Cys Ala Ser Val Phe Thr Met Ile Val Met Ser Ile Glu Arg Tyr	
145 150 155 160	
tat gcc ata atc cat cca ttg aaa aag cgt cca gga cga cga tca act	528
Tyr Ala Ile Ile His Pro Leu Lys Lys Arg Pro Gly Arg Arg Ser Thr	
165 170 175	
gtt acc atc atc ata atg att tgg ttc atg gca ttt ttg ttc ggg gtt	576
Val Thr Ile Ile Ile Met Ile Trp Phe Met Ala Phe Leu Phe Gly Val	
180 185 190	
cca gca ttt ctt gcg tca aag gtt gat gtc tat tac ttc tac gat ggt	624
Pro Ala Phe Leu Ala Ser Lys Val Asp Val Tyr Tyr Phe Tyr Asp Gly	
195 200 205	
tac aca tta tac gag aat cca ctg tgc ctt gca gac aat tat ccc ggt	672
Tyr Thr Leu Tyr Glu Asn Pro Leu Cys Leu Ala Asp Asn Tyr Pro Gly	
210 215 220	
gga aat gaa tca cta ctt gga cag gta tac aac aac gga ctg ata act	720
Gly Asn Glu Ser Leu Leu Gly Gln Val Tyr Asn Asn Gly Leu Ile Thr	
225 230 235 240	
gtt caa tac att ctt cca cta tgc att tta tca gct gct tat tat cga	768
Val Gln Tyr Ile Leu Pro Leu Cys Ile Leu Ser Ala Ala Tyr Tyr Arg	
245 250 255	
gtt ggt gtt gag ctg aga aag gat aaa acc gtc ggt gac gtg aga cat	816
Val Gly Val Glu Leu Arg Lys Asp Lys Thr Val Gly Asp Val Arg His	
260 265 270	
gca aaa tca gtg gcc gca aag aag aag gcg tca atc atg ttg gca gtg	864
Ala Lys Ser Val Ala Ala Lys Lys Lys Ala Ser Ile Met Leu Ala Val	
275 280 285	
gtt gtg ttc att ttc atg att gtc tgg ttc cca tac aat gcc tac tat	912
Val Val Phe Ile Phe Met Ile Val Trp Phe Pro Tyr Asn Ala Tyr Tyr	
290 295 300	
ctc aca ttg cat tta gtt gag cca att ggg aat aaa atg ttg agt ctg	960
Leu Thr Leu His Leu Val Glu Pro Ile Gly Asn Lys Met Leu Ser Leu	
305 310 315 320	
tac att tat atc aac atc tat tgg ttg gga atg tcg tca act gtc ttc	1008
Tyr Ile Tyr Ile Asn Ile Tyr Trp Leu Gly Met Ser Ser Thr Val Phe	
325 330 335	
aat cct gtc atc tat tat ttt atg aac aaa cga ttc cgt gtc gga ttc	1056
Asn Pro Val Ile Tyr Tyr Phe Met Asn Lys Arg Phe Arg Val Gly Phe	
340 345 350	
cat cac gca ttc cgt tgg ctt cca ttc gtt cgt tcc gat aaa gat gaa	1104
His His Ala Phe Arg Trp Leu Pro Phe Val Arg Ser Asp Lys Asp Glu	
355 360 365	
tat caa aca att ctt tca cag aca cgt cca tct ctg atg cca ccc aca	1152
Tyr Gln Thr Ile Leu Ser Gln Thr Arg Pro Ser Leu Met Pro Pro Thr	
370 375 380	

# ATTORNEY DOCKET NO. 6223.N

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 385 390

1176

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 <213> Homo sapiens

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Gln Ser Phe Tyr Asp Gln Met Tyr Gln Thr His Gly Val Tyr Phe Ile  
 35 40 45

Phe Glu Pro Thr Pro Phe Val His Pro Ile Val Ser Gln Ile Phe Tyr  
 50 55 60

Gly Ile Leu Phe Thr Leu Thr Ile Phe Leu Ala Leu Met Gly Asn Phe  
 65 70 75 80

Thr Val Met Trp Ile Ile Leu Tyr His Arg Gln Met Arg Ser Val Thr  
 85 90 95

Asn Tyr Tyr Leu Phe Asn Leu Ala Val Ala Asp Ala Ser Ile Ser Val  
 100 105 110

Phe Asn Thr Gly Phe Ser Trp Ser Tyr Asn Tyr Tyr Tyr Val Trp Lys  
 115 120 125

Phe Gly Ser Phe Tyr Cys Arg Ile Asn Asn Leu Met Gly Ile Thr Pro  
 130 135 140

Ile Cys Ala Ser Val Phe Thr Met Ile Val Met Ser Ile Glu Arg Tyr  
 145 150 155 160

Tyr Ala Ile Ile His Pro Leu Lys Lys Arg Pro Gly Arg Arg Ser Thr  
 165 170 175

Val Thr Ile Ile Ile Met Ile Trp Phe Met Ala Phe Leu Phe Gly Val  
 180 185 190

Pro Ala Phe Leu Ala Ser Lys Val Asp Val Tyr Tyr Phe Tyr Asp Gly  
 195 200 205

Tyr Thr Leu Tyr Glu Asn Pro Leu Cys Leu Ala Asp Asn Tyr Pro Gly  
 210 215 220

Gly Asn Glu Ser Leu Leu Gly Gln Val Tyr Asn Asn Gly Leu Ile Thr  
 225 230 235 240

Val Gln Tyr Ile Leu Pro Leu Cys Ile Leu Ser Ala Ala Tyr Tyr Arg  
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Val Gly Val Glu Leu Arg Lys Asp Lys Thr Val Gly Asp Val Arg His

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<220>
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agt ttt tcc acg tta acg ctc acc gca att gca att gac aga tat att Ser Phe Ser Thr Leu Thr Leu Thr Ala Ile Ala Ile Asp Arg Tyr Ile 115 120 125	384
ctc atc tgt cat ccg acg aaa gaa ccg ata cgc aaa gat caa gca ttg Leu Ile Cys His Pro Thr Lys Glu Pro Ile Arg Lys Asp Gln Ala Leu 130 135 140	432
aaa atg ata agt ttc aac agc gcc atc tca gtt ggg ctt tcg gta cca Lys Met Ile Ser Phe Asn Ser Ala Ile Ser Val Gly Leu Ser Val Pro 145 150 155 160	480
tta ttc atg aaa cag gaa ctt atg caa ttc cga aac tat tgc gga gaa Leu Phe Met Lys Gln Glu Leu Met Gln Phe Arg Asn Tyr Cys Gly Glu 165 170 175	528
tat tgc tca gaa aac tgg gga cca gat gct tat ttg aga agc gtt tat Tyr Cys Ser Glu Asn Trp Gly Pro Asp Ala Tyr Leu Arg Ser Val Tyr 180 185 190	576
gga aca gtg gtg ttc att att caa ttc gtg ttt cca ttg atc acc atc Gly Thr Val Val Phe Ile Ile Gln Phe Val Phe Pro Leu Ile Thr Ile 195 200 205	624
aca ttt tgc tat gca tct att tct atc aaa cta cga cgt ggt gtc ttt Thr Phe Cys Tyr Ala Ser Ile Ser Ile Lys Leu Arg Arg Gly Val Phe 210 215 220	672
gtg aga gga agc caa aaa gag ctg atg tct gag gca cgt cgt caa ttg Val Arg Gly Ser Gln Lys Glu Leu Met Ser Glu Ala Arg Arg Gln Leu 225 230 235 240	720
acg caa cgt cga ctt cgc aca aat cgg atg ctt att atc atg aca gtc Thr Gln Arg Arg Leu Arg Thr Asn Arg Met Leu Ile Ile Met Thr Val 245 250 255	768
aca ttc gct ctc tca tgg ctg cca tct gtt ggc ttc aac ttt ctc cgg Thr Phe Ala Leu Ser Trp Leu Pro Ser Val Gly Phe Asn Phe Leu Arg 260 265 270	816
gat tac tca gcg ctt ccc ggc att att gat tca caa gat tac cta ttc Asp Tyr Ser Ala Leu Pro Gly Ile Ile Asp Ser Gln Asp Tyr Leu Phe 275 280 285	864
gga att att ttc cat tgc att tca atg aca tcg gtg att gtg aat ccc Gly Ile Ile Phe His Cys Ile Ser Met Thr Ser Val Ile Val Asn Pro 290 295 300	912
ttc ctt tac ggt tac tgt aat gaa cac ttt cgt gct gca ttt gcg gct Phe Leu Tyr Gly Tyr Cys Asn Glu His Phe Arg Ala Ala Phe Ala Ala 305 310 315 320	960
ctt ctt gac acg gtg aag gca gct tgt gga atg aga cga gtg agt ccg Leu Leu Asp Thr Val Lys Ala Ala Cys Gly Met Arg Arg Val Ser Pro 325 330 335	1008

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340 345 350

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35 40 45  
Val Val Met Ser Val Met Arg Phe Lys Val Leu Gln Ser Val Arg Asn  
50 55 60  
Met Phe Ile Val Ser Leu Ser Val Ser Asp Ile Phe Val Ala Ile Val  
65 70 75 80  
Ser Gly Ser Val Thr Pro Ile Thr Ala Phe Ser Lys Val Trp Leu Phe  
85 90 95  
Gly Gly Pro Leu Cys His Leu Leu Pro Leu Leu Gln Gly Thr Ala Leu  
100 105 110  
Ser Phe Ser Thr Leu Thr Leu Thr Ala Ile Ala Ile Asp Arg Tyr Ile  
115 120 125  
Leu Ile Cys His Pro Thr Lys Glu Pro Ile Arg Lys Asp Gln Ala Leu  
130 135 140  
Lys Met Ile Ser Phe Asn Ser Ala Ile Ser Val Gly Leu Ser Val Pro  
145 150 155 160  
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165 170 175  
Tyr Cys Ser Glu Asn Trp Gly Pro Asp Ala Tyr Leu Arg Ser Val Tyr  
180 185 190  
Gly Thr Val Val Phe Ile Ile Gln Phe Val Phe Pro Leu Ile Thr Ile  
195 200 205  
Thr Phe Cys Tyr Ala Ser Ile Ser Ile Lys Leu Arg Arg Gly Val Phe  
210 215 220  
Val Arg Gly Ser Gln Lys Glu Leu Met Ser Glu Ala Arg Arg Gln Leu  
225 230 235 240  
Thr Gln Arg Arg Leu Arg Thr Asn Arg Met Leu Ile Ile Met Thr Val  
245 250 255

# ATTORNEY DOCKET NO. 6223.N

Thr Phe Ala Leu Ser Trp Leu Pro Ser Val Gly Phe Asn Phe Leu Arg  
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Asp Tyr Ser Ala Leu Pro Gly Ile Ile Asp Ser Gln Asp Tyr Leu Phe  
275 280 285

Gly Ile Ile Phe His Cys Ile Ser Met Thr Ser Val Ile Val Asn Pro  
290 295 300

Phe Leu Tyr Gly Tyr Cys Asn Glu His Phe Arg Ala Ala Phe Ala Ala  
305 310 315 320

Leu Leu Asp Thr Val Lys Ala Ala Cys Gly Met Arg Arg Val Ser Pro  
325 330 335

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1 5 10 15

tgg ttt gca gaa atg caa aat tat cag aac agt ctc tac aaa ata aat 96  
Trp Phe Ala Glu Met Gln Asn Tyr Gln Asn Ser Leu Tyr Lys Ile Asn  
20 25 30

ttt gat gga tcc cca ata gtg cca atg tat ggg ttg gtg tgc tca ttc 144  
Phe Asp Gly Ser Pro Ile Val Pro Met Tyr Gly Leu Val Cys Ser Phe  
35 40 45

gga gct ctt gcc aac ttt atc gtt ctc ctc gca ttt gtc aga act gca 192  
Gly Ala Leu Ala Asn Phe Ile Val Leu Leu Ala Phe Val Arg Thr Ala  
50 55 60

aat ctt cga aac ttg aga aac agt ttc att gtg aat ttg gca ttt tcc 240  
Asn Leu Arg Asn Leu Arg Asn Ser Phe Ile Val Asn Leu Ala Phe Ser  
65 70 75 80

gat ttg att ctg tgt gtg gtc aca gcg cca gtc act ctc tat acg agt 288  
Asp Leu Ile Leu Cys Val Val Thr Ala Pro Val Thr Leu Tyr Thr Ser  
85 90 95

tta aat tta ttt tgg cca ttc gga gat tgg tcg tgc aag ttt ctc gct 336  
Leu Asn Leu Phe Trp Pro Phe Gly Asp Trp Ser Cys Lys Phe Leu Ala  
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# ATTORNEY DOCKET NO. 6223.N

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att gca atg gat cgt gtt ctt cta aca ctt tgt cca gtt cga tgg aga	432
Ile Ala Met Asp Arg Val Leu Thr Leu Cys Pro Val Arg Trp Arg	
130 135 140	
tta gca gca act gca cca ctt tta tgc tat ggt gtc gta tgg atc att	480
Leu Ala Ala Thr Ala Pro Leu Leu Cys Tyr Gly Val Val Trp Ile Ile	
145 150 155 160	
tcg atc ata gtt gct ctt cca tat gca ttg gca gta agc tca aag ttg	528
Ser Ile Ile Val Ala Leu Pro Tyr Ala Leu Ala Val Ser Ser Lys Leu	
165 170 175	
gct cca ttt gat cca tgg agt gat aga gca act ccc aaa atg cta acc	576
Ala Pro Phe Asp Pro Trp Ser Asp Arg Ala Thr Pro Lys Met Leu Thr	
180 185 190	
tat tgc aac cgt caa gtg cca gaa ata tgt gca gag atg caa gaa gcc	624
Tyr Cys Asn Arg Gln Val Pro Glu Ile Cys Ala Glu Met Gln Glu Ala	
195 200 205	
tgg gat aat gca att gtc tca aaa acc acg tac aca ttt gta gta ctt	672
Trp Asp Asn Ala Ile Val Ser Lys Thr Thr Tyr Thr Phe Val Val Leu	
210 215 220	
ggg att caa tat att cta cca ctt gct gcc ttg gca tat gca tat ttc	720
Gly Ile Gln Tyr Ile Leu Pro Leu Ala Ala Leu Ala Tyr Ala Tyr Phe	
225 230 235 240	
caa atc ggg tca aca att caa aaa cga tca aaa gta tca cgt aca gtg	768
Gln Ile Gly Ser Thr Ile Gln Lys Arg Ser Lys Val Ser Arg Thr Val	
245 250 255	
gat aca aca aga aga atg caa atg caa aat aga aat cga aga gct ctt	816
Asp Thr Thr Arg Arg Met Gln Met Gln Asn Arg Asn Arg Arg Ala Leu	
260 265 270	
ttg ttg ctc ttt ttg tta gta ctc aca tat gcc gtg tgt tgg gct cca	864
Leu Leu Leu Phe Leu Leu Val Leu Thr Tyr Ala Val Cys Trp Ala Pro	
275 280 285	
atg aat att tat cat gtt ttg aat ggt ctc gag att att aac tat tca	912
Met Asn Ile Tyr His Val Leu Asn Gly Leu Glu Ile Ile Asn Tyr Ser	
290 295 300	
caa aat atg tac atc ttc tgt cat ttg gtc gga atc tct tca acg tgt	960
Gln Asn Met Tyr Ile Phe Cys His Leu Val Gly Ile Ser Ser Thr Cys	
305 310 315 320	
ggt aat cca ata gta tat gca ctg gtc aat gaa tca ttt aga aat gct	1008
Val Asn Pro Ile Val Tyr Ala Leu Val Asn Glu Ser Phe Arg Asn Ala	
325 330 335	
tta caa tca atg att ctt caa ttc cgc ccg tgt tac gtc aca act acc	1056
Leu Gln Ser Met Ile Leu Gln Phe Arg Pro Cys Tyr Val Thr Thr Thr	
340 345 350	

# ATTORNEY DOCKET NO. 6223.N

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 Gly Thr Ala Ala Thr Asn Val Tyr Ala Tyr Ser Ala Thr Ser Lys Ala  
 355 360 365

gaa aat gtc act ttg atg cgt gat cct ttc tca aca act cct cgt cca 1152  
 Glu Asn Val Thr Leu Met Arg Asp Pro Phe Ser Thr Thr Pro Arg Pro  
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 Asn Glu Arg Pro Asp Ser Val  
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Phe Asp Gly Ser Pro Ile Val Pro Met Tyr Gly Leu Val Cys Ser Phe  
 35 40 45

Gly Ala Leu Ala Asn Phe Ile Val Leu Leu Ala Phe Val Arg Thr Ala  
 50 55 60

Asn Leu Arg Asn Leu Arg Asn Ser Phe Ile Val Asn Leu Ala Phe Ser  
 65 70 75 80

Asp Leu Ile Leu Cys Val Val Thr Ala Pro Val Thr Leu Tyr Thr Ser  
 85 90 95

Leu Asn Leu Phe Trp Pro Phe Gly Asp Trp Ser Cys Lys Phe Leu Ala  
 100 105 110

Gly Val Gln Ala Val Asn Thr Phe Val Ser Ser Leu Thr Leu Ala Phe  
 115 120 125

Ile Ala Met Asp Arg Val Leu Leu Thr Leu Cys Pro Val Arg Trp Arg  
 130 135 140

Leu Ala Ala Thr Ala Pro Leu Leu Cys Tyr Gly Val Val Trp Ile Ile  
 145 150 155 160

Ser Ile Ile Val Ala Leu Pro Tyr Ala Leu Ala Val Ser Ser Lys Leu  
 165 170 175

Ala Pro Phe Asp Pro Trp Ser Asp Arg Ala Thr Pro Lys Met Leu Thr  
 180 185 190

Tyr Cys Asn Arg Gln Val Pro Glu Ile Cys Ala Glu Met Gln Glu Ala  
 195 200 205

Trp Asp Asn Ala Ile Val Ser Lys Thr Thr Tyr Thr Phe Val Val Leu  
 210 215 220



# ATTORNEY DOCKET NO. 6223.N

Gly Ile Gln Tyr Ile Leu Pro Leu Ala Ala Leu Ala Tyr Ala Tyr Phe  
225 230 235 240

Gln Ile Gly Ser Thr Ile Gln Lys Arg Ser Lys Val Ser Arg Thr Val  
245 250 255

Asp Thr Thr Arg Arg Met Gln Met Gln Asn Arg Asn Arg Arg Ala Leu  
260 265 270

Leu Leu Leu Phe Leu Leu Val Leu Thr Tyr Ala Val Cys Trp Ala Pro  
275 280 285

Met Asn Ile Tyr His Val Leu Asn Gly Leu Glu Ile Ile Asn Tyr Ser  
290 295 300

Gln Asn Met Tyr Ile Phe Cys His Leu Val Gly Ile Ser Ser Thr Cys  
305 310 315 320

Val Asn Pro Ile Val Tyr Ala Leu Val Asn Glu Ser Phe Arg Asn Ala  
325 330 335

Leu Gln Ser Met Ile Leu Gln Phe Arg Pro Cys Tyr Val Thr Thr Thr  
340 345 350

Gly Thr Ala Ala Thr Asn Val Tyr Ala Tyr Ser Ala Thr Ser Lys Ala  
355 360 365

Glu Asn Val Thr Leu Met Arg Asp Pro Phe Ser Thr Thr Pro Arg Pro  
370 375 380

Asn Glu Arg Pro Asp Ser Val  
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1				5					10					15		

ggt	ttc	gag	att	gat	tta	ttt	aac	ttc	att	aac	ata	aca	att	tat	aag	96
Gly	Phe	Glu	Ile	Asp	Leu	Phe	Asn	Phe	Ile	Asn	Ile	Thr	Ile	Tyr	Lys	
			20					25					30			

aaa	ttt	cct	ttt	ttt	ttt	cat	cga	ctg	aaa	ttt	gat	aga	aaa	ttg	gat	144
Lys	Phe	Pro	Phe	Phe	Phe	His	Arg	Leu	Lys	Phe	Asp	Arg	Lys	Leu	Asp	
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ttt	atg	att	aat	ttc	cag	aac	acg	ctt	ttc	gat	ttt	ccc	att	tta	gaa	192
Phe	Met	Ile	Asn	Phe	Gln	Asn	Thr	Leu	Phe	Asp	Phe	Pro	Ile	Leu	Glu	

# ATTORNEY DOCKET NO. 6223.N

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65	70	75	80
ttt tca acg ata ttt tta ttt tat gga ttt tat gca tgt aat ttt ctt			288
Phe Ser Thr Ile Phe Leu Phe Tyr Gly Phe Tyr Ala Cys Asn Phe Leu			
	85	90	95
caa aac aac ctt cga tgc atg gtt agt tcg gcg gcc acc att tcg acc			336
Gln Asn Asn Leu Arg Cys Met Val Ser Ser Ala Ala Thr Ile Ser Thr			
	100	105	110
att tca acc aca acg act ccc tcc acc atc agc aac gtt atc aca agt			384
Ile Ser Thr Thr Thr Thr Pro Ser Thr Ile Ser Asn Val Ile Thr Ser			
	115	120	125
cat tcg aac aat ggc tcg tgc att cag atc gct gag gcg att gcg gca			432
His Ser Asn Asn Gly Ser Cys Ile Gln Ile Ala Glu Ala Ile Ala Ala			
	130	135	140
caa ggc atc gat gat att act gta gac ttt tac atc cga tca atc ttc			480
Gln Gly Ile Asp Asp Ile Thr Val Asp Phe Tyr Ile Arg Ser Ile Phe			
	145	150	155
aca ttc ctc tac ggg ttc ctg ttt gta tta ggc att ttt gga aac ggc			528
Thr Phe Leu Tyr Gly Phe Leu Phe Val Leu Gly Ile Phe Gly Asn Gly			
	165	170	175
ggc gta cta tgg gcg gtg gcg aga aac aag cgg ctc caa tcg gct cgc			576
Gly Val Leu Trp Ala Val Ala Arg Asn Lys Arg Leu Gln Ser Ala Arg			
	180	185	190
aac gta ttt ctg ctc aac ttg atc ttc acc gat ttg ata ttg gtg ttc			624
Asn Val Phe Leu Leu Asn Leu Ile Phe Thr Asp Leu Ile Leu Val Phe			
	195	200	205
aca gcg att cca gtc aca cca tgg tac gcg atg acc aaa gac tgg gca			672
Thr Ala Ile Pro Val Thr Pro Trp Tyr Ala Met Thr Lys Asp Trp Ala			
	210	215	220
ttc ggg tca gtg atg tgc cat tta gtt cct ttg tca aat tcg tgt tcg			720
Phe Gly Ser Val Met Cys His Leu Val Pro Leu Ser Asn Ser Cys Ser			
	225	230	235
gtg ttt gtg acg agt tgg agc ctc act gca atc tcc tta gat aaa ttt			768
Val Phe Val Thr Ser Trp Ser Leu Thr Ala Ile Ser Leu Asp Lys Phe			
	245	250	255
ctg cat atc aac gat ccc acc aaa caa cca gtt tct att cgt caa gcg			816
Leu His Ile Asn Asp Pro Thr Lys Gln Pro Val Ser Ile Arg Gln Ala			
	260	265	270
ttg gca ata aca ttt ctt atc tgg ata gtc tca aca ctg ata aat cta			864
Leu Ala Ile Thr Phe Leu Ile Trp Ile Val Ser Thr Leu Ile Asn Leu			
	275	280	285
ccg tat ctt atg tct ttc gag cac gtc gat gga agc ttt tac gtt cag			912
Pro Tyr Leu Met Ser Phe Glu His Val Asp Gly Ser Phe Tyr Val Gln			

# ATTORNEY DOCKET NO. 6223.N

290	295	300	
ccc gga gaa act cca tac tgc ggg cac ttt tgc gac gag gcg aat tgg			960
Pro Gly Glu Thr Pro Tyr Cys Gly His Phe Cys Asp Glu Ala Asn Trp			
305	310	315	320
cag agc gaa aat agt cga aag att tac gga act acg gtt atg ttg tta			1008
Gln Ser Glu Asn Ser Arg Lys Ile Tyr Gly Thr Thr Val Met Leu Leu			
	325	330	335
cag ttc gtc gtg ccg atg gca gtg atc acg tat tgc tac ttc aaa atc			1056
Gln Phe Val Val Pro Met Ala Val Ile Thr Tyr Cys Tyr Phe Lys Ile			
	340	345	350
ttg caa aaa gtg tca aaa gac atg atc atc caa aat gct caa ttc tgt			1104
Leu Gln Lys Val Ser Lys Asp Met Ile Ile Gln Asn Ala Gln Phe Cys			
	355	360	365
caa tca ctg aca caa aag cag aga agt gat gcg acg tca cga aag aag			1152
Gln Ser Leu Thr Gln Lys Gln Arg Ser Asp Ala Thr Ser Arg Lys Lys			
	370	375	380
aaa gtg aat tat att cta att gca atg gtt gtc aca ttt atc ggg tgt			1200
Lys Val Asn Tyr Ile Leu Ile Ala Met Val Val Thr Phe Ile Gly Cys			
	385	390	400
tgg ttg cct tta aca tta ctc aat ttg gtc aaa gat ttt aaa aaa gag			1248
Trp Leu Pro Leu Leu Leu Asn Leu Val Lys Asp Phe Lys Lys Glu			
	405	410	415
ccc gaa tgg cta aaa cgt cag ccg ttc ttc tgg gca ata aat gct cac			1296
Pro Glu Trp Leu Lys Arg Gln Pro Phe Phe Trp Ala Ile Asn Ala His			
	420	425	430
gtc ata gcc atg tcc tta gtc gtc tgg aac cct ctg cta ttc ttt tgg			1344
Val Ile Ala Met Ser Leu Val Val Trp Asn Pro Leu Leu Phe Phe Trp			
	435	440	445
ctg aca cga aaa caa aaa cgt tcc gga ctg tca aaa ata ctc aac tca			1392
Leu Thr Arg Lys Gln Lys Arg Ser Gly Leu Ser Lys Ile Leu Asn Ser			
	450	455	460
aca gag ggt tcg aaa aaa gca ggt ggt tct gga ttg cga ggg atc cag			1440
Thr Glu Gly Ser Lys Lys Ala Gly Gly Ser Gly Leu Arg Gly Ile Gln			
	465	470	475
cta cac gac ctc ctc ccg acc tct act cat tcg gac aga tgt gca ggc			1488
Leu His Asp Leu Leu Pro Thr Ser Thr His Ser Asp Arg Cys Ala Gly			
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aac tct ttc taa			1500
Asn Ser Phe			

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<212> PRT

<213> Homo sapiens

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			20					25					30		
Lys	Phe	Pro	Phe	Phe	Phe	His	Arg	Leu	Lys	Phe	Asp	Arg	Lys	Leu	Asp
		35					40					45			
Phe	Met	Ile	Asn	Phe	Gln	Asn	Thr	Leu	Phe	Asp	Phe	Pro	Ile	Leu	Glu
	50					55					60				
Lys	Asn	Ile	Phe	Arg	Phe	Ser	Asn	Leu	Lys	Asn	Leu	Lys	Thr	Leu	Lys
65					70					75					80
Phe	Ser	Thr	Ile	Phe	Leu	Phe	Tyr	Gly	Phe	Tyr	Ala	Cys	Asn	Phe	Leu
				85					90					95	
Gln	Asn	Asn	Leu	Arg	Cys	Met	Val	Ser	Ser	Ala	Ala	Thr	Ile	Ser	Thr
			100					105					110		
Ile	Ser	Thr	Thr	Thr	Thr	Pro	Ser	Thr	Ile	Ser	Asn	Val	Ile	Thr	Ser
		115					120					125			
His	Ser	Asn	Asn	Gly	Ser	Cys	Ile	Gln	Ile	Ala	Glu	Ala	Ile	Ala	Ala
	130					135					140				
Gln	Gly	Ile	Asp	Asp	Ile	Thr	Val	Asp	Phe	Tyr	Ile	Arg	Ser	Ile	Phe
145					150					155					160
Thr	Phe	Leu	Tyr	Gly	Phe	Leu	Phe	Val	Leu	Gly	Ile	Phe	Gly	Asn	Gly
				165					170					175	
Gly	Val	Leu	Trp	Ala	Val	Ala	Arg	Asn	Lys	Arg	Leu	Gln	Ser	Ala	Arg
			180					185					190		
Asn	Val	Phe	Leu	Leu	Asn	Leu	Ile	Phe	Thr	Asp	Leu	Ile	Leu	Val	Phe
		195					200					205			
Thr	Ala	Ile	Pro	Val	Thr	Pro	Trp	Tyr	Ala	Met	Thr	Lys	Asp	Trp	Ala
	210					215					220				
Phe	Gly	Ser	Val	Met	Cys	His	Leu	Val	Pro	Leu	Ser	Asn	Ser	Cys	Ser
225					230					235					240
Val	Phe	Val	Thr	Ser	Trp	Ser	Leu	Thr	Ala	Ile	Ser	Leu	Asp	Lys	Phe
				245					250					255	
Leu	His	Ile	Asn	Asp	Pro	Thr	Lys	Gln	Pro	Val	Ser	Ile	Arg	Gln	Ala
			260					265					270		
Leu	Ala	Ile	Thr	Phe	Leu	Ile	Trp	Ile	Val	Ser	Thr	Leu	Ile	Asn	Leu
		275					280					285			
Pro	Tyr	Leu	Met	Ser	Phe	Glu	His	Val	Asp	Gly	Ser	Phe	Tyr	Val	Gln
	290					295					300				
Pro	Gly	Glu	Thr	Pro	Tyr	Cys	Gly	His	Phe	Cys	Asp	Glu	Ala	Asn	Trp
305					310					315					320
Gln	Ser	Glu	Asn	Ser	Arg	Lys	Ile	Tyr	Gly	Thr	Thr	Val	Met	Leu	Leu
				325					330					335	
Gln	Phe	Val	Val	Pro	Met	Ala	Val	Ile	Thr	Tyr	Cys	Tyr	Phe	Lys	Ile
			340					345					350		

# ATTORNEY DOCKET NO. 6223.N

Leu Gln Lys Val Ser Lys Asp Met Ile Ile Gln Asn Ala Gln Phe Cys  
 355 360 365

Gln Ser Leu Thr Gln Lys Gln Arg Ser Asp Ala Thr Ser Arg Lys Lys  
 370 375 380

Lys Val Asn Tyr Ile Leu Ile Ala Met Val Val Thr Phe Ile Gly Cys  
 385 390 395 400

Trp Leu Pro Leu Thr Leu Leu Asn Leu Val Lys Asp Phe Lys Lys Glu  
 405 410 415

Pro Glu Trp Leu Lys Arg Gln Pro Phe Phe Trp Ala Ile Asn Ala His  
 420 425 430

Val Ile Ala Met Ser Leu Val Val Trp Asn Pro Leu Leu Phe Phe Trp  
 435 440 445

Leu Thr Arg Lys Gln Lys Arg Ser Gly Leu Ser Lys Ile Leu Asn Ser  
 450 455 460

Thr Glu Gly Ser Lys Lys Ala Gly Gly Ser Gly Leu Arg Gly Ile Gln  
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Asn Ser Phe

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 ccc ata gat tcc cac ttg ttt aga aaa att ttg tgt ttt aga att tat 96  
 Pro Ile Asp Ser His Leu Phe Arg Lys Ile Leu Cys Phe Arg Ile Tyr  
 20 25 30  
 gac gac act atc agt ttt gag aga aaa att gga ata atc att cca aca 144  
 Asp Asp Thr Ile Ser Phe Glu Arg Lys Ile Gly Ile Ile Ile Pro Thr  
 35 40 45  
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 Ile Phe Ala Val Ile Ile Leu Val Gly Leu Val Gly Asn Ala Leu Val  
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 gtg att gtt gct ttt gga cga caa atg aga aat tca acc aac act ctt 240  
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# ATTORNEY DOCKET NO. 6223.N

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85 90 95	
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100 105 110	
tgg aca tgc tct atg atc aat ttc ttc cag cat acg tct gca tac tgt Trp Thr Cys Ser Met Ile Asn Phe Phe Gln His Thr Ser Ala Tyr Cys	384
115 120 125	
agt gtt tgg aca ttg acc ctt atg gcc ctc gat aga tat cta gca gtt Ser Val Trp Thr Leu Thr Leu Met Ala Leu Asp Arg Tyr Leu Ala Val	432
130 135 140	
gta tat cca gtt gaa tca atg acg tta cga aca cca agg aac act gtg Val Tyr Pro Val Glu Ser Met Thr Leu Arg Thr Pro Arg Asn Thr Val	480
145 150 155 160	
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165 170 175	
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180 185 190	
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195 200 205	
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210 215 220	
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225 230 235 240	
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245 250 255	
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260 265 270	
gca act gct gcc aaa aga aaa gtt acc cgc ctt gta ctg tgt gtt ttg Ala Thr Ala Ala Lys Arg Lys Val Thr Arg Leu Val Leu Cys Val Leu	864
275 280 285	
atc acc tgg gca ctt tgc tgg ctt cca cta aac gtg tgc ttt ttc atg Ile Thr Trp Ala Leu Cys Trp Leu Pro Leu Asn Val Cys Phe Phe Met	912
290 295 300	
tct ggt ctc gcc tac ccg gaa cca ctt gtt ata tct cat ggt gtc atc Ser Gly Leu Ala Tyr Pro Glu Pro Leu Val Ile Ser His Gly Val Ile	960
305 310 315 320	

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325 330 335

tgt ctt aat cca att cta tac gct ttg atg tcg cag agt ttc cgg gaa 1056  
Cys Leu Asn Pro Ile Leu Tyr Ala Leu Met Ser Gln Ser Phe Arg Glu  
340 345 350

gga ttc att cga gtc atg aaa atg cta ata aat aag cta tcg cgt gga 1104  
Gly Phe Ile Arg Val Met Lys Met Leu Ile Asn Lys Leu Ser Arg Gly  
355 360 365

agg ttc tgc act aat tac cga cga agt gct ctt cgg aca gag ctc aca 1152  
Arg Phe Cys Thr Asn Tyr Arg Arg Ser Ala Leu Arg Thr Glu Leu Thr  
370 375 380

cac tat aac caa act cca gca cat cca gca aac act gtg gtt caa gtg 1200  
His Tyr Asn Gln Thr Pro Ala His Pro Ala Asn Thr Val Val Gln Val  
385 390 395 400

tca aac gga gaa cga tcc tcg ctt ctg aaa gat aac tcg agc tct gcg 1248  
Ser Asn Gly Glu Arg Ser Ser Leu Leu Lys Asp Asn Ser Ser Ser Ala  
405 410 415

acg tct gta caa cca ctt cgg acg tca att caa gcg aag aaa aca aag 1296  
Thr Ser Val Gln Pro Leu Arg Thr Ser Ile Gln Ala Lys Lys Thr Lys  
420 425 430

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<211> 444

<212> PRT

<213> Homo sapiens

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Asp Asp Thr Ile Ser Phe Glu Arg Lys Ile Gly Ile Ile Ile Pro Thr  
35 40 45

Ile Phe Ala Val Ile Ile Leu Val Gly Leu Val Gly Asn Ala Leu Val  
50 55 60

Val Ile Val Ala Phe Gly Arg Gln Met Arg Asn Ser Thr Asn Thr Leu  
65 70 75 80

Ile Ile Gly Leu Ala Ile Ser Asp Leu Met Phe Leu Leu Leu Cys Val  
85 90 95

Pro Phe Thr Ala Val Asp Tyr Ala Ala Pro Thr Trp Ile Phe Pro Glu  
100 105 110

# ATTORNEY DOCKET NO. 6223.N

Trp	Thr	Cys	Ser	Met	Ile	Asn	Phe	Phe	Gln	His	Thr	Ser	Ala	Tyr	Cys	
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Ser	Val	Trp	Thr	Leu	Thr	Leu	Met	Ala	Leu	Asp	Arg	Tyr	Leu	Ala	Val	
	130					135					140					
Val	Tyr	Pro	Val	Glu	Ser	Met	Thr	Leu	Arg	Thr	Pro	Arg	Asn	Thr	Val	
145					150					155					160	
Ile	Ala	Leu	Cys	Phe	Ile	Tyr	Ile	Ile	Ile	Ile	Ala	Ser	Gln	Ile	Pro	
				165					170					175		
Val	Gly	Arg	Met	His	Gly	Ile	Tyr	Val	Tyr	Asp	Phe	Ile	Met	Glu	Lys	
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Arg	Ser	Thr	Cys	Ala	Ile	Leu	Thr	Ile	Ala	Thr	Ala	Glu	Ala	Thr	Pro	
		195					200					205				
Thr	Met	Ala	Arg	Thr	Tyr	Phe	Met	Thr	Phe	Asn	Val	Phe	Gly	Tyr	Val	
	210					215					220					
Leu	Pro	Leu	Gly	Ile	Ser	Val	Val	Leu	Tyr	Gly	Leu	Met	Leu	Arg	Lys	
225					230					235					240	
Leu	Trp	Asp	Met	Pro	Arg	Pro	Gly	Asn	Ser	Gln	Ser	Val	Gly	Gly	Arg	
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Asn	Leu	Thr	Asn	Arg	Asp	Ser	Gly	Ser	Ser	Ile	Arg	Arg	Arg	Pro	Glu	
			260					265					270			
Ala	Thr	Ala	Ala	Lys	Arg	Lys	Val	Thr	Arg	Leu	Val	Leu	Cys	Val	Leu	
		275					280					285				
Ile	Thr	Trp	Ala	Leu	Cys	Trp	Leu	Pro	Leu	Asn	Val	Cys	Phe	Phe	Met	
	290					295					300					
Ser	Gly	Leu	Ala	Tyr	Pro	Glu	Pro	Leu	Val	Ile	Ser	His	Gly	Val	Ile	
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Met	Val	Ile	Val	Gln	Ile	Ala	Ser	Gln	Val	Leu	Ala	Tyr	Thr	Asn	Ser	
				325					330					335		
Cys	Leu	Asn	Pro	Ile	Leu	Tyr	Ala	Leu	Met	Ser	Gln	Ser	Phe	Arg	Glu	
			340					345					350			
Gly	Phe	Ile	Arg	Val	Met	Lys	Met	Leu	Ile	Asn	Lys	Leu	Ser	Arg	Gly	
	355						360					365				
Arg	Phe	Cys	Thr	Asn	Tyr	Arg	Arg	Ser	Ala	Leu	Arg	Thr	Glu	Leu	Thr	
	370					375					380					
His	Tyr	Asn	Gln	Thr	Pro	Ala	His	Pro	Ala	Asn	Thr	Val	Val	Gln	Val	
385					390					395					400	
Ser	Asn	Gly	Glu	Arg	Ser	Ser	Leu	Leu	Lys	Asp	Asn	Ser	Ser	Ser	Ala	
				405					410					415		
Thr	Ser	Val	Gln	Pro	Leu	Arg	Thr	Ser	Ile	Gln	Ala	Lys	Lys	Thr	Lys	
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# ATTORNEY DOCKET NO. 6223.N

Asn Val Cys Asp Thr Met Leu Phe Val Cys Phe Phe  
435 440

<210> 43  
<211> 1131  
<212> DNA  
<213> Homo sapiens

<220>  
<221> CDS  
<222> (1)..(1128)

<220>  
<223> Clone identifier: CEGPCR3

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gaa tac aat gat atg aac cag ata aga gca ata ttc tcg tta ctg tac 96
Glu Tyr Asn Asp Met Asn Gln Ile Arg Ala Ile Phe Ser Leu Leu Tyr
          20          25          30

ctt ctt gtt tgg gtt gga gct att gtt ggc aac act cta gta ctt tat 144
Leu Leu Val Trp Val Gly Ala Ile Val Gly Asn Thr Leu Val Leu Tyr
          35          40          45

gta ctc act ttt aat cag gta tca ctg tca gtt agg acg gta ttt gtt 192
Val Leu Thr Phe Asn Gln Val Ser Leu Ser Val Arg Thr Val Phe Val
          50          55          60

gga tgt cta gct ggt tca gac ctt cta atg tgc ctt ttc tcg ttg cca 240
Gly Cys Leu Ala Gly Ser Asp Leu Leu Met Cys Leu Phe Ser Leu Pro
          65          70          75          80

att acc gcg att tct ata ttt tca aga gtt tgg gta ttt cct gct ata 288
Ile Thr Ala Ile Ser Ile Phe Ser Arg Val Trp Val Phe Pro Ala Ile
          85          90          95

ttt tgc aag ttg atc gga gtt ttc cag ggc ggt acg att ttt gtc tca 336
Phe Cys Lys Leu Ile Gly Val Phe Gln Gly Gly Thr Ile Phe Val Ser
          100          105          110

tca ttc aca tta aca gtt att gct ctg gac aga tgt gta cta att cta 384
Ser Phe Thr Leu Thr Val Ile Ala Leu Asp Arg Cys Val Leu Ile Leu
          115          120          125

cgt cca aat cag gag ata gta aat ttc ccg aga gct gtc ttc att gtt 432
Arg Pro Asn Gln Glu Ile Val Asn Phe Pro Arg Ala Val Phe Ile Val
          130          135          140

ttc tgc att tgg ctt ctc gga tac tct cta gca ctt cct gta ggc atc 480
Phe Cys Ile Trp Leu Leu Gly Tyr Ser Leu Ala Leu Pro Val Gly Ile
          145          150          155          160

tac agc gac att gca gta tac gac gaa att tgc ggc aca ttc tgt gaa 528
Tyr Ser Asp Ile Ala Val Tyr Asp Glu Ile Cys Gly Thr Phe Cys Glu
          165          170          175

gag aat tgg cct gat ttc aat ccg gat act gga aga tgg gga att cga 576
Glu Asn Trp Pro Asp Phe Asn Pro Asp Thr Gly Arg Ser Gly Ile Arg

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# ATTORNEY DOCKET NO. 6223.N

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aga gct tat gga ctt tct gtg ttg gta ctt caa ttt ggt att cct gca Arg Ala Tyr Gly Leu Ser Val Leu Val Leu Gln Phe Gly Ile Pro Ala 195 200 205			624
ttg ata agt tca att tgt tac tgg atg att agt cga gtg atg tca gat Leu Ile Ser Ser Ile Cys Tyr Trp Met Ile Ser Arg Val Met Ser Asp 210 215 220			672
caa tta gca aga aga aga ggg cac aat att cga ccg gaa tct gaa aca Gln Leu Ala Arg Arg Arg Gly His Asn Ile Arg Pro Glu Ser Glu Thr 225 230 235 240			720
aag ctg gtg aat cga aag aca aga gct aat cga atg atg atc gta atg Lys Leu Val Asn Arg Lys Thr Arg Ala Asn Arg Met Met Ile Val Met 245 250 255			768
gtt gtt gga ttc gtt ctc gcg tgg atg cca ttc aat gca gtc aat ctc Val Val Gly Phe Val Leu Ala Trp Met Pro Phe Asn Ala Val Asn Leu 260 265 270			816
tac cgt gac cta ttt gga att tct aaa tgg tat tct aca gtc ttt gcg Tyr Arg Asp Leu Phe Gly Ile Ser Lys Trp Tyr Ser Thr Val Phe Ala 275 280 285			864
ctt tgc cac gta tgc gca atg tgc tcc gct gtg ctc aac cca atc atc Leu Cys His Val Cys Ala Met Cys Ser Ala Val Leu Asn Pro Ile Ile 290 295 300			912
tat tcc tgg ttc aat cct caa ttc cga caa agt atc acc act ttg ttc Tyr Ser Trp Phe Asn Pro Gln Phe Arg Gln Ser Ile Thr Thr Leu Phe 305 310 315 320			960
aag ggt act gat gaa gct aga ttg atc aag aag aaa cca caa tct acc Lys Gly Thr Asp Glu Ala Arg Leu Ile Lys Lys Lys Pro Gln Ser Thr 325 330 335			1008
agt aaa atg gtt tcg tat ccg act aat ttc tcc gag atc cga aaa gaa Ser Lys Met Val Ser Tyr Pro Thr Asn Phe Ser Glu Ile Arg Lys Glu 340 345 350			1056
aca gaa att gca tcg aca aag aca aaa atc aca att gct gaa aac gac Thr Glu Ile Ala Ser Thr Lys Thr Lys Ile Thr Ile Ala Glu Asn Asp 355 360 365			1104
tat cga gct gga gat caa ctt tta taa Tyr Arg Ala Gly Asp Gln Leu Leu 370 375			1131

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<211> 376

<212> PRT

<213> Homo sapiens

<400> 44

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# ATTORNEY DOCKET NO. 6223.N

Glu Tyr Asn Asp Met Asn Gln Ile Arg Ala Ile Phe Ser Leu Leu Tyr  
 20 25 30  
 Leu Leu Val Trp Val Gly Ala Ile Val Gly Asn Thr Leu Val Leu Tyr  
 35 40 45  
 Val Leu Thr Phe Asn Gln Val Ser Leu Ser Val Arg Thr Val Phe Val  
 50 55 60  
 Gly Cys Leu Ala Gly Ser Asp Leu Leu Met Cys Leu Phe Ser Leu Pro  
 65 70 75 80  
 Ile Thr Ala Ile Ser Ile Phe Ser Arg Val Trp Val Phe Pro Ala Ile  
 85 90 95  
 Phe Cys Lys Leu Ile Gly Val Phe Gln Gly Gly Thr Ile Phe Val Ser  
 100 105 110  
 Ser Phe Thr Leu Thr Val Ile Ala Leu Asp Arg Cys Val Leu Ile Leu  
 115 120 125  
 Arg Pro Asn Gln Glu Ile Val Asn Phe Pro Arg Ala Val Phe Ile Val  
 130 135 140  
 Phe Cys Ile Trp Leu Leu Gly Tyr Ser Leu Ala Leu Pro Val Gly Ile  
 145 150 155 160  
 Tyr Ser Asp Ile Ala Val Tyr Asp Glu Ile Cys Gly Thr Phe Cys Glu  
 165 170 175  
 Glu Asn Trp Pro Asp Phe Asn Pro Asp Thr Gly Arg Ser Gly Ile Arg  
 180 185 190  
 Arg Ala Tyr Gly Leu Ser Val Leu Val Leu Gln Phe Gly Ile Pro Ala  
 195 200 205  
 Leu Ile Ser Ser Ile Cys Tyr Trp Met Ile Ser Arg Val Met Ser Asp  
 210 215 220  
 Gln Leu Ala Arg Arg Arg Gly His Asn Ile Arg Pro Glu Ser Glu Thr  
 225 230 235 240  
 Lys Leu Val Asn Arg Lys Thr Arg Ala Asn Arg Met Met Ile Val Met  
 245 250 255  
 Val Val Gly Phe Val Leu Ala Trp Met Pro Phe Asn Ala Val Asn Leu  
 260 265 270  
 Tyr Arg Asp Leu Phe Gly Ile Ser Lys Trp Tyr Ser Thr Val Phe Ala  
 275 280 285  
 Leu Cys His Val Cys Ala Met Cys Ser Ala Val Leu Asn Pro Ile Ile  
 290 295 300  
 Tyr Ser Trp Phe Asn Pro Gln Phe Arg Gln Ser Ile Thr Thr Leu Phe  
 305 310 315 320  
 Lys Gly Thr Asp Glu Ala Arg Leu Ile Lys Lys Lys Pro Gln Ser Thr  
 325 330 335  
 Ser Lys Met Val Ser Tyr Pro Thr Asn Phe Ser Glu Ile Arg Lys Glu  
 340 345 350

# ATTORNEY DOCKET NO. 6223.N

Thr Glu Ile Ala Ser Thr Lys Thr Lys Ile Thr Ile Ala Glu Asn Asp  
355 360 365

Tyr Arg Ala Gly Asp Gln Leu Leu  
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<210> 45

<211> 1209

<212> DNA

<213> Homo sapiens

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<221> CDS

<222> (1)..(1209)

<220>

<223> Clone identifier: CEGPCR5

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aaa atc aac tac ttt ttt cga gat gat cag gtt atc aat ggg act gag 96  
Lys Ile Asn Tyr Phe Phe Arg Asp Asp Gln Val Ile Asn Gly Thr Glu  
20 25 30

tat tca cca aaa gag ttc gga tat ttc atc aca ttc gca tac atg ctg 144  
Tyr Ser Pro Lys Glu Phe Gly Tyr Phe Ile Thr Phe Ala Tyr Met Leu  
35 40 45

atc att ttg ttt gga gca ata ggc aac ttt ttg aca atc atc gta gtc 192  
Ile Ile Leu Phe Gly Ala Ile Gly Asn Phe Leu Thr Ile Ile Val Val  
50 55 60

ata ctc aac cca gca atg cgg aca aca agg aac ttt ttc att tta aac 240  
Ile Leu Asn Pro Ala Met Arg Thr Thr Arg Asn Phe Phe Ile Leu Asn  
65 70 75 80

ttg gcg ctg tcg gac ttt ttt gtt tgt att gtg aca gcg ccg acc aca 288  
Leu Ala Leu Ser Asp Phe Phe Val Cys Ile Val Thr Ala Pro Thr Thr  
85 90 95

tta tac acg gtt ctc tac atg ttc tgg cca ttt agc agg aca tta tgc 336  
Leu Tyr Thr Val Leu Tyr Met Phe Trp Pro Phe Ser Arg Thr Leu Cys  
100 105 110

aaa att gcg ggt tcg ctg caa ggc ttt aac ata ttt tta tcc aca ttc 384  
Lys Ile Ala Gly Ser Leu Gln Gly Phe Asn Ile Phe Leu Ser Thr Phe  
115 120 125

tcg ata gcc tca att gct gtt gat aga tac gtg ctc att atc ttc cca 432  
Ser Ile Ala Ser Ile Ala Val Asp Arg Tyr Val Leu Ile Ile Phe Pro  
130 135 140

acg aag cga gaa cga caa caa aat ctg tcg ttc tgc ttt ttt atc atg 480  
Thr Lys Arg Glu Arg Gln Gln Asn Leu Ser Phe Cys Phe Phe Ile Met  
145 150 155 160

atc tgg gtg att tcc cta atc ctt gcg gtt cca ctt ctg cag gct tct. 528  
Ile Trp Val Ile Ser Leu Ile Leu Ala Val Pro Leu Leu Gln Ala Ser

# ATTORNEY DOCKET NO. 6223.N

165										170					175					
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Asp	Leu	Thr	Pro	Val	Phe	Val	Glu	Pro	Ser	Cys	Asp	Leu	Ala	Leu	Tyr					
			180					185					190							
att	tgc	cat	gag	caa	aat	gag	ata	tgg	gaa	aag	atg	atc	ata	tca	aaa	624				
Ile	Cys	His	Glu	Gln	Asn	Glu	Ile	Trp	Glu	Lys	Met	Ile	Ile	Ser	Lys					
			195				200					205								
ggc	acc	tac	acg	ttg	gca	gtt	ctt	atc	acc	caa	tac	gca	ttt	ccc	ctg	672				
Gly	Thr	Tyr	Thr	Leu	Ala	Val	Leu	Ile	Thr	Gln	Tyr	Ala	Phe	Pro	Leu					
	210					215					220									
ttt	tca	cta	gtc	ttc	gcc	tac	tcc	cgg	ata	gca	cat	cgg	atg	aag	ctg	720				
Phe	Ser	Leu	Val	Phe	Ala	Tyr	Ser	Arg	Ile	Ala	His	Arg	Met	Lys	Leu					
225					230					235					240					
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Arg	Phe	Ala	Asn	Arg	Asn	Gln	Asn	Val	Thr	Thr	Asn	Thr	Asn	Thr	Ser					
			245					250						255						
cag	agg	aga	cga	tcc	gtc	gtg	gaa	cgt	caa	cga	cgc	acc	cac	ctc	ctt	816				
Gln	Arg	Arg	Arg	Ser	Val	Val	Glu	Arg	Gln	Arg	Arg	Thr	His	Leu	Leu					
			260					265					270							
ctt	gta	tgc	gtt	gta	gct	gta	ttc	gcc	gtc	gcc	tgg	ctg	cca	ctc	aac	864				
Leu	Val	Cys	Val	Val	Ala	Val	Phe	Ala	Val	Ala	Trp	Leu	Pro	Leu	Asn					
			275				280					285								
gtt	ttt	cat	atc	ttc	aac	aca	ttc	gag	ctg	gtc	aac	agt	ttt	tcc	gtt	912				
Val	Phe	His	Ile	Phe	Asn	Thr	Phe	Glu	Leu	Val	Asn	Ser	Phe	Ser	Val					
	290					295					300									
aca	acg	ttc	agc	atc	tgt	cac	tgc	ttg	gca	atg	tgc	tcg	gcg	tgc	ttg	960				
Thr	Thr	Phe	Ser	Ile	Cys	His	Cys	Leu	Ala	Met	Cys	Ser	Ala	Cys	Leu					
305					310					315					320					
aat	ccg	ctg	atc	tat	gca	ttt	ttc	aat	cat	aac	ttc	cgg	atc	gaa	ttt	1008				
Asn	Pro	Leu	Ile	Tyr	Ala	Phe	Phe	Asn	His	Asn	Phe	Arg	Ile	Glu	Phe					
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atg	cat	ctt	ttc	gat	aga	gtt	ggg	ttg	aga	tcc	ctt	cga	gtc	gtg	ata	1056				
Met	His	Leu	Phe	Asp	Arg	Val	Gly	Leu	Arg	Ser	Leu	Arg	Val	Val	Ile					
			340					345					350							
ttt	gga	gag	caa	gag	tcg	ctc	aag	aaa	agt	atg	cgc	act	gaa	ttc	aga	1104				
Phe	Gly	Glu	Gln	Glu	Ser	Leu	Lys	Lys	Ser	Met	Arg	Thr	Glu	Phe	Arg					
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agc	cgt	gga	ggc	tgt	aag	acg	gta	act	act	gca	gag	cca	gca	acc	ttc	1152				
Ser	Arg	Gly	Gly	Cys	Lys	Thr	Val	Thr	Thr	Ala	Glu	Pro	Ala	Thr	Phe					
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cag	aga	atg	aat	gaa	agt	atg	att	ctg	agt	gcg	atg	gag	caa	gat	gag	1200				
Gln	Arg	Met	Asn	Glu	Ser	Met	Ile	Leu	Ser	Ala	Met	Glu	Gln	Asp	Glu					
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Glu	Leu																			

# ATTORNEY DOCKET NO. 6223.N

<210> 46  
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 <213> Homo sapiens

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                           20                          25                          30  
 Tyr Ser Pro Lys Glu Phe Gly Tyr Phe Ile Thr Phe Ala Tyr Met Leu  
                           35                          40                          45  
 Ile Ile Leu Phe Gly Ala Ile Gly Asn Phe Leu Thr Ile Ile Val Val  
           50                          55                          60  
 Ile Leu Asn Pro Ala Met Arg Thr Thr Arg Asn Phe Phe Ile Leu Asn  
           65                          70                          75                          80  
 Leu Ala Leu Ser Asp Phe Phe Val Cys Ile Val Thr Ala Pro Thr Thr  
                           85                          90                          95  
 Leu Tyr Thr Val Leu Tyr Met Phe Trp Pro Phe Ser Arg Thr Leu Cys  
                           100                          105                          110  
 Lys Ile Ala Gly Ser Leu Gln Gly Phe Asn Ile Phe Leu Ser Thr Phe  
           115                          120                          125  
 Ser Ile Ala Ser Ile Ala Val Asp Arg Tyr Val Leu Ile Ile Phe Pro  
           130                          135                          140  
 Thr Lys Arg Glu Arg Gln Gln Asn Leu Ser Phe Cys Phe Phe Ile Met  
           145                          150                          155                          160  
 Ile Trp Val Ile Ser Leu Ile Leu Ala Val Pro Leu Leu Gln Ala Ser  
                           165                          170                          175  
 Asp Leu Thr Pro Val Phe Val Glu Pro Ser Cys Asp Leu Ala Leu Tyr  
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 Ile Cys His Glu Gln Asn Glu Ile Trp Glu Lys Met Ile Ile Ser Lys  
           195                          200                          205  
 Gly Thr Tyr Thr Leu Ala Val Leu Ile Thr Gln Tyr Ala Phe Pro Leu  
           210                          215                          220  
 Phe Ser Leu Val Phe Ala Tyr Ser Arg Ile Ala His Arg Met Lys Leu  
           225                          230                          235                          240  
 Arg Phe Ala Asn Arg Asn Gln Asn Val Thr Thr Asn Thr Asn Thr Ser  
                           245                          250                          255  
 Gln Arg Arg Arg Ser Val Val Glu Arg Gln Arg Arg Thr His Leu Leu  
                           260                          265                          270  
 Leu Val Cys Val Val Ala Val Phe Ala Val Ala Trp Leu Pro Leu Asn  
           275                          280                          285

# ATTORNEY DOCKET NO. 6223.N

Val Phe His Ile Phe Asn Thr Phe Glu Leu Val Asn Ser Phe Ser Val  
 290 295 300

Thr Thr Phe Ser Ile Cys His Cys Leu Ala Met Cys Ser Ala Cys Leu  
 305 310 315 320

Asn Pro Leu Ile Tyr Ala Phe Phe Asn His Asn Phe Arg Ile Glu Phe  
 325 330 335

Met His Leu Phe Asp Arg Val Gly Leu Arg Ser Leu Arg Val Val Ile  
 340 345 350

Phe Gly Glu Gln Glu Ser Leu Lys Lys Ser Met Arg Thr Glu Phe Arg  
 355 360 365

Ser Arg Gly Gly Cys Lys Thr Val Thr Thr Ala Glu Pro Ala Thr Phe  
 370 375 380

Gln Arg Met Asn Glu Ser Met Ile Leu Ser Ala Met Glu Gln Asp Glu  
 385 390 395 400

Gln Leu

<210> 47  
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<220>  
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31

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 <223> Description of Artificial Sequence: PCR primer

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31

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ATTORNEY DOCKET NO. 6223.N

<220>

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<213> Artificial Sequence

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<211> 31

<212> DNA

<213> Artificial Sequence

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<223> C10C6.2\_F

<400> 51

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<210> 52

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31

<210> 53

<211> 31

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**ATTORNEY DOCKET NO. 6223.N**

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<400> 54  
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<210> 55  
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<220>  
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<220>  
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<210> 56  
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<220>  
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<400> 56  
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<210> 57  
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<212> DNA  
<213> Artificial Sequence

<220>  
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<220>  
<223> C38C10.1\_F

<400> 57  
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ATTORNEY DOCKET NO. 6223.N

<210> 58  
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<220>  
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<400> 58  
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31

<210> 59  
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<220>  
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<400> 59  
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<210> 60  
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<220>  
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<400> 60  
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31

<210> 61  
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<220>  
<223> C50F7.1\_F

<400> 61  
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31

<210> 62

ATTORNEY DOCKET NO. 6223.N

<211> 31  
<212> DNA  
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<220>  
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<220>  
<223> C50F7.1\_R

<400> 62  
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<210> 63  
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<220>  
<223> Description of Artificial Sequence: PCR primer

<220>  
<223> C56G3.1\_F

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<220>  
<223> C56G3.1\_R

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<223> Description of Artificial Sequence: PCR primer

<220>  
<223> F01E11.5\_F

<400> 65  
gccgccatgt gcttcgcaga aaaaggagaa g 31

<210> 66  
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ATTORNEY DOCKET NO. 6223.N

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: PCR primer

<220>

<223> F01E11.5\_R

<400> 66

tctagattag acacgagaag ttgagctggg t

31

<210> 67

<211> 31

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: PCR primer

<220>

<223> F35G8.1\_F

<400> 67

gccgccatgg gactccaagg gcgtgcaatt a

31

<210> 68

<211> 31

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: PCR primer

<220>

<223> F35G8.1\_R

<400> 68

tctagattaa agatccgttc tgagaacttc g

31

<210> 69

<211> 31

<212> DNA

<213> Artificial Sequence

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<223> Description of Artificial Sequence: PCR primer

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<223> F41E7.3\_F

<400> 69

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31

<210> 70

<211> 31

<212> DNA

<213> Artificial Sequence

ATTORNEY DOCKET NO. 6223.N

<220>  
<223> Description of Artificial Sequence: PCR primer

<220>  
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<400> 70  
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<210> 71  
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<212> DNA  
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<220>  
<223> Description of Artificial Sequence: PCR primer

<220>  
<223> T05A1.1\_F

<400> 71  
gccgccatga tcaacgaaac agaagagaca t 31

<210> 72  
<211> 31  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: PCR primer

<220>  
<223> T05A1.1\_R

<400> 72  
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<210> 73  
<211> 31  
<212> DNA  
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<220>  
<223> Description of Artificial Sequence: PCR primer

<220>  
<223> ZC412.1\_F

<400> 73  
gccgccatgg gtgatgctga atctcatcat t 31

<210> 74  
<211> 31  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: PCR primer

ATTORNEY DOCKET NO. 6223.N

<220>

<223> ZC412.1\_R

<400> 74

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<210> 75

<211> 31

<212> DNA

<213> Artificial Sequence

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<223> Description of Artificial Sequence: PCR primer

<220>

<223> C49A9.7\_F

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31

<210> 76

<211> 31

<212> DNA

<213> Artificial Sequence

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<223> Description of Artificial Sequence: PCR primer

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<400> 76

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<210> 77

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<213> Caenorhabditis elegans/flip 3

<220>

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<400> 77

Ala Ser Glu Asp Ala Leu Phe Gly Thr Met Arg Phe  
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<210> 78

<211> 8

<212> PRT

<213> Caenorhabditis elegans/flip 4

<220>

<221> MOD\_RES

<222> (8)

<223> AMIDATION

ATTORNEY DOCKET NO. 6223.N

<400> 78  
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1 5

<210> 79  
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<213> A. suum

<220>  
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<220>  
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<400> 79  
Ala Val Pro Gly Val Leu Arg Phe  
1 5

<210> 80  
<211> 8  
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<220>  
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<223> AMIDATION

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Asp Val Pro Gly Val Leu Arg Phe  
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<210> 81  
<211> 11  
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<220>  
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<400> 81  
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<210> 82  
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# ATTORNEY DOCKET NO. 6223.N

<400> 82

Glu Asp Gly Asn Ala Pro Phe Gly Thr Met Arg Phe  
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<210> 83

<211> 14

<212> PRT

<213> Caenorhabditis elegans/flp 14

<220>

<221> MOD\_RES

<222> (14)

<223> AMIDATION

<400> 83

Glu Ile Val Phe His Gln Ile Ser Pro Ile Phe Phe Arg Phe  
1 5 10

<210> 84

<211> 9

<212> PRT

<213> A. suum

<220>

<223> AF4

<220>

<221> MOD\_RES

<222> (9)

<223> AMIDATION

<400> 84

Gly Asp Val Pro Gly Val Leu Arg Phe  
1 5

<210> 85

<211> 9

<212> PRT

<213> Caenorhabditis elegans/flp15

<220>

<221> MOD\_RES

<222> (9)

<223> AMIDATION

<400> 85

Gly Gly Pro Gln Gly Pro Leu Arg Phe  
1 5

<210> 86

<211> 9

<212> PRT

<213> A. suum/C.elegans (flp 21)

<220>

<223> AF9



ATTORNEY DOCKET NO. 6223.N

<220>  
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<222> (9)  
<223> AMIDATION  
  
<400> 86  
Gly Leu Gly Pro Arg Pro Leu Arg Phe  
1 5

<210> 87  
<211> 8  
<212> PRT  
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<220>  
<223> AF20

<220>  
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Gly Met Pro Gly Val Leu Arg Phe  
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<210> 88  
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<213> Manduca

<220>  
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<223> AMIDATION

<400> 88  
Gly Asn Ser Phe Leu Arg Phe  
1 5

<210> 89  
<211> 8  
<212> PRT  
<213> Caenorhabditis elegans/flp 15

<220>  
<221> MOD\_RES  
<222> (8)  
<223> AMIDATION

<400> 89  
Gly Pro Ser Gly Pro Leu Arg Phe  
1 5

<210> 90  
<211> 5  
<212> PRT

## ATTORNEY DOCKET NO. 6223.N

<213> Artificial Sequence

<220>

<221> SITE

<222> (3)

<223> Xaa=Norleucine

<220>

<221> MOD\_RES

<222> (5)

<223> AMIDATION

<220>

<223> Description of Artificial Sequence: Synthetic

<400> 90

Ile Leu Xaa Arg Phe  
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<210> 91

<211> 7

<212> PRT

<213> Caenorhabditis elegans/flp 1

<220>

<221> MOD\_RES

<222> (7)

<223> AMIDATION

<400> 91

Lys Pro Asn Phe Leu Arg Phe  
1 5

<210> 92

<211> 9

<212> PRT

<213> Caenorhabditis elegans/flp 18

<220>

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<222> (9)

<223> AMIDATION

<400> 92

Lys Ser Val Pro Gly Val Leu Arg Phe  
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<210> 93

<211> 10

<212> PRT

<213> Caenorhabditis elegans/flp11

<220>

<221> MOD\_RES

<222> (10)

<223> AMIDATION

<400> 93

Asn Gly Ala Pro Gln Pro Phe Val Arg Phe

# ATTORNEY DOCKET NO. 6223.N

1 5 10

<210> 94  
 <211> 10  
 <212> PRT  
 <213> Locust

<220>  
 <223> SchistoFLRFa

<220>  
 <221> MOD\_RES  
 <222> (10)  
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<400> 94  
 Pro Asp Val Asp His Val Phe Leu Arg Phe  
 1 5 10

<210> 95  
 <211> 11  
 <212> PRT  
 <213> Locust

<220>  
 <223> leucomyosuppressin

<220>  
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 <222> (11)  
 <223> AMIDATION

<220>  
 <221> SITE  
 <222> (1)  
 <223> Xaa= pyro

<400> 95  
 Xaa Glu Asp Val Asp His Val Phe Leu Arg Phe  
 1 5 10

<210> 96  
 <211> 13  
 <212> PRT  
 <213> Caenorhabditis elegans/flp3

<220>  
 <221> MOD\_RES  
 <222> (13)  
 <223> AMIDATION

<400> 96  
 Ser Ala Asp Asp Ser Ala Pro Phe Gly Thr Met Arg Phe  
 1 5 10

<210> 97  
 <211> 10  
 <212> PRT

# ATTORNEY DOCKET NO. 6223.N

<213> Caenorhabditis elegans/flp 3

<220>

<221> MOD\_RES

<222> (10)

<223> AMIDATION

<400> 97

Ser Ala Glu Pro Phe Gly Thr Met Arg Phe  
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<210> 98

<211> 9

<212> PRT

<213> Caenorhabditis elegans/flp 18

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<221> MOD\_RES

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<223> AMIDATION

<400> 98

Ser Glu Val Pro Gly Val Leu Arg Phe  
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<210> 99

<211> 8

<212> PRT

<213> Caenorhabditis elegans/flp 3

<220>

<221> MOD\_RES

<222> (8)

<223> AMIDATION

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Ser Pro Leu Gly Thr Met Arg Phe  
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<210> 100

<211> 8

<212> PRT

<213> Caenorhabditis elegans/flp 18

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<221> MOD\_RES

<222> (8)

<223> AMIDATION

<400> 100

Ser Val Pro Gly Val Leu Arg Phe  
1 5

<210> 101

<211> 10

<212> PRT

<213> Drosophila

# ATTORNEY DOCKET NO. 6223.N

<220>  
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 <222> (10)  
 <223> AMIDATION

<400> 101  
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<210> 102  
 <211> 8  
 <212> PRT  
 <213> lobster

<220>  
 <223> Lobster peptide II

<220>  
 <221> MOD\_RES  
 <222> (8)  
 <223> AMIDATION

<400> 102  
 Thr Asn Arg Asn Phe Leu Arg Phe  
           1                          5

<210> 103  
 <211> 11  
 <212> PRT  
 <213> locust

<220>  
 <221> SITE  
 <222> (1)  
 <223> Xaa=IodoY

<220>  
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 <222> (11)  
 <223> AMIDATION

<400> 103  
 Xaa Pro Asp Val Asp His Val Phe Leu Arg Phe  
           1                          5                          10

<210> 104  
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 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> CDS  
 <222> (1)..(1191)

<220>  
 <223> Clone identifier: CEGPCR19.2

<400> 104  
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 Met Val Ser Ser Ala Ala Thr Ile Ser Thr Ile Ser Thr Thr Thr Thr  
           1                          5                          10                          15

# ATTORNEY DOCKET NO. 6223.N

ccc tcc acc atc agc aac gtt atc aca agt cat tcg aac aat ggc tcg	96
Pro Ser Thr Ile Ser Asn Val Ile Thr Ser His Ser Asn Asn Gly Ser	
20 25 30	
tgc att cag atc gct gag gcg att gcg gca caa ggc atc gat gat att	144
Cys Ile Gln Ile Ala Glu Ala Ile Ala Ala Gln Gly Ile Asp Asp Ile	
35 40 45	
act gta gac ttt tac atc cga tca atc ttc aca ttc ctc tac ggg ttc	192
Thr Val Asp Phe Tyr Ile Arg Ser Ile Phe Thr Phe Leu Tyr Gly Phe	
50 55 60	
ctg ttt gta tta ggc att ttt gga aac ggc ggc gta cta tgg gcg gtg	240
Leu Phe Val Leu Gly Ile Phe Gly Asn Gly Gly Val Leu Trp Ala Val	
65 70 75 80	
gcg aga aac aag cgg ctc caa tcg gct cgc aac gta ttt ctg ctc aac	288
Ala Arg Asn Lys Arg Leu Gln Ser Ala Arg Asn Val Phe Leu Leu Asn	
85 90 95	
ttg atc ttc acc gat ttg ata ttg gtg ttc aca gcg att cca gtc aca	336
Leu Ile Phe Thr Asp Leu Ile Leu Val Phe Thr Ala Ile Pro Val Thr	
100 105 110	
cca tgg tac gcg atg acc aaa gac tgg gca ttc ggg tca gtg atg tgc	384
Pro Trp Tyr Ala Met Thr Lys Asp Trp Ala Phe Gly Ser Val Met Cys	
115 120 125	
cat tta gtt cct ttg tca aat tcg tgt tcg gtg ttt gtg acg agt tgg	432
His Leu Val Pro Leu Ser Asn Ser Cys Ser Val Phe Val Thr Ser Trp	
130 135 140	
agc ctc act gca atc tcc tta gat aaa ttt ctg cat atc aac gat ccc	480
Ser Leu Thr Ala Ile Ser Leu Asp Lys Phe Leu His Ile Asn Asp Pro	
145 150 155 160	
acc aaa caa cca gtt tct att cgt caa gcg ttg gca ata aca ttt ctt	528
Thr Lys Gln Pro Val Ser Ile Arg Gln Ala Leu Ala Ile Thr Phe Leu	
165 170 175	
atc tgg ata gtc tca aca ctg ata aat cta ccg tat ctt atg tct ttc	576
Ile Trp Ile Val Ser Thr Leu Ile Asn Leu Pro Tyr Leu Met Ser Phe	
180 185 190	
gag cac gtc gat gga agc ttt tac gtt cag ccc gga gaa act cca tac	624
Glu His Val Asp Gly Ser Phe Tyr Val Gln Pro Gly Glu Thr Pro Tyr	
195 200 205	
tgc ggg cac ttt tgc gac gag gcg aat tgg cag agc gaa aat agt cga	672
Cys Gly His Phe Cys Asp Glu Ala Asn Trp Gln Ser Glu Asn Ser Arg	
210 215 220	
aag att tac gga act acg gtt atg ttg tta cag ttc gtc gtg ccg atg	720
Lys Ile Tyr Gly Thr Val Met Leu Leu Gln Phe Val Val Pro Met	
225 230 235 240	
gca gtg atc acg tat tgc tac ttc aaa atc ttg caa aaa gtg tca aaa	768
Ala Val Ile Thr Tyr Cys Tyr Phe Lys Ile Leu Gln Lys Val Ser Lys	
245 250 255	

# ATTORNEY DOCKET NO. 6223.N

gac atg atc atc caa aat gct caa ttc tgt caa tca ctg aca caa aag	816
Asp Met Ile Ile Gln Asn Ala Gln Phe Cys Gln Ser Leu Thr Gln Lys	
260 265 270	
cag aga agt gat gcg acg tca cga aag aag aaa gtg aat tat att cta	864
Gln Arg Ser Asp Ala Thr Ser Arg Lys Lys Lys Val Asn Tyr Ile Leu	
275 280 285	
att gca atg gtt gtc aca ttt atc ggg tgt tgg ttg cct tta aca tta	912
Ile Ala Met Val Val Thr Phe Ile Gly Cys Trp Leu Pro Leu Thr Leu	
290 295 300	
ctc aat ttg gtc aaa gat ttt aaa aaa gag ccc gaa tgg cta aaa cgt	960
Leu Asn Leu Val Lys Asp Phe Lys Lys Glu Pro Glu Trp Leu Lys Arg	
305 310 315 320	
cag ccg ttc ttc tgg gca ata aat gct cac gtc ata gcc atg tcc tta	1008
Gln Pro Phe Phe Trp Ala Ile Asn Ala His Val Ile Ala Met Ser Leu	
325 330 335	
gtc gtc tgg aac cct ctg cta ttc ttt tgg ctg aca cga aaa caa aaa	1056
Val Val Trp Asn Pro Leu Leu Phe Phe Trp Leu Thr Arg Lys Gln Lys	
340 345 350	
cgt tcc gga ctg tca aaa ata ctc aac tca aca gag ggt tcg aaa aaa	1104
Arg Ser Gly Leu Ser Lys Ile Leu Asn Ser Thr Glu Gly Ser Lys Lys	
355 360 365	
gca ggt ggt tct gga ttg cga ggg atc cag cta cac gac ctc ctc ccg	1152
Ala Gly Gly Ser Gly Leu Arg Gly Ile Gln Leu His Asp Leu Leu Pro	
370 375 380	
acc tct act cat tcg gac aga tgt gca ggc aac tct ttc ta	1193
Thr Ser Thr His Ser Asp Arg Cys Ala Gly Asn Ser Phe	
385 390 395	
<210> 105	
<211> 397	
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<213> Homo sapiens	
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1 5 10 15	
Pro Ser Thr Ile Ser Asn Val Ile Thr Ser His Ser Asn Asn Gly Ser	
20 25 30	
Cys Ile Gln Ile Ala Glu Ala Ile Ala Ala Gln Gly Ile Asp Asp Ile	
35 40 45	
Thr Val Asp Phe Tyr Ile Arg Ser Ile Phe Thr Phe Leu Tyr Gly Phe	
50 55 60	
Leu Phe Val Leu Gly Ile Phe Gly Asn Gly Gly Val Leu Trp Ala Val	
65 70 75 80	
Ala Arg Asn Lys Arg Leu Gln Ser Ala Arg Asn Val Phe Leu Leu Asn	
85 90 95	

# ATTORNEY DOCKET NO. 6223.N

Leu Ile Phe Thr Asp Leu Ile Leu Val Phe Thr Ala Ile Pro Val Thr  
 100 105 110  
 Pro Trp Tyr Ala Met Thr Lys Asp Trp Ala Phe Gly Ser Val Met Cys  
 115 120 125  
 His Leu Val Pro Leu Ser Asn Ser Cys Ser Val Phe Val Thr Ser Trp  
 130 135 140  
 Ser Leu Thr Ala Ile Ser Leu Asp Lys Phe Leu His Ile Asn Asp Pro  
 145 150 155 160  
 Thr Lys Gln Pro Val Ser Ile Arg Gln Ala Leu Ala Ile Thr Phe Leu  
 165 170 175  
 Ile Trp Ile Val Ser Thr Leu Ile Asn Leu Pro Tyr Leu Met Ser Phe  
 180 185 190  
 Glu His Val Asp Gly Ser Phe Tyr Val Gln Pro Gly Glu Thr Pro Tyr  
 195 200 205  
 Cys Gly His Phe Cys Asp Glu Ala Asn Trp Gln Ser Glu Asn Ser Arg  
 210 215 220  
 Lys Ile Tyr Gly Thr Thr Val Met Leu Leu Gln Phe Val Val Pro Met  
 225 230 235 240  
 Ala Val Ile Thr Tyr Cys Tyr Phe Lys Ile Leu Gln Lys Val Ser Lys  
 245 250 255  
 Asp Met Ile Ile Gln Asn Ala Gln Phe Cys Gln Ser Leu Thr Gln Lys  
 260 265 270  
 Gln Arg Ser Asp Ala Thr Ser Arg Lys Lys Lys Val Asn Tyr Ile Leu  
 275 280 285  
 Ile Ala Met Val Val Thr Phe Ile Gly Cys Trp Leu Pro Leu Thr Leu  
 290 295 300  
 Leu Asn Leu Val Lys Asp Phe Lys Lys Glu Pro Glu Trp Leu Lys Arg  
 305 310 315 320  
 Gln Pro Phe Phe Trp Ala Ile Asn Ala His Val Ile Ala Met Ser Leu  
 325 330 335  
 Val Val Trp Asn Pro Leu Leu Phe Phe Trp Leu Thr Arg Lys Gln Lys  
 340 345 350  
 Arg Ser Gly Leu Ser Lys Ile Leu Asn Ser Thr Glu Gly Ser Lys Lys  
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 370 375 380  
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 385 390 395

<210> 106  
 <211> 1301  
 <212> DNA  
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<220>

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<222> (1) .. (1299)

<220>

<223> Clone identifier: CEGPCR19.1

<400> 106

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ccc tcc acc atc agc aac gtt atc aca agt cat tcg aac aat ggc tcg	96
Pro Ser Thr Ile Ser Asn Val Ile Thr Ser His Ser Asn Asn Gly Ser	
20 25 30	
tgc att cag atc gct gag gcg att gcg gca caa ggc atc gat gat att	144
Cys Ile Gln Ile Ala Glu Ala Ile Ala Ala Gln Gly Ile Asp Asp Ile	
35 40 45	
act gta gac ttt tac atc cga tca atc ttc aca ttc ctc tac ggg ttc	192
Thr Val Asp Phe Tyr Ile Arg Ser Ile Phe Thr Phe Leu Tyr Gly Phe	
50 55 60	
ctg ttt gta tta ggc att ttt gga aac ggc ggc gta cta tgg gcg gtg	240
Leu Phe Val Leu Gly Ile Phe Gly Asn Gly Gly Val Leu Trp Ala Val	
65 70 75 80	
gcg aga aac aag cgg ctc caa tcg gct cgc aac gta ttt ctg ctc aac	288
Ala Arg Asn Lys Arg Leu Gln Ser Ala Arg Asn Val Phe Leu Leu Asn	
85 90 95	
ttg atc ttc acc gat ttg ata ttg gtg ttc aca gcg att cca gtc aca	336
Leu Ile Phe Thr Asp Leu Ile Leu Val Phe Thr Ala Ile Pro Val Thr	
100 105 110	
cca tgg tac gcg atg acc aaa gac tgg gca ttc ggg tca gtg atg tgc	384
Pro Trp Tyr Ala Met Thr Lys Asp Trp Ala Phe Gly Ser Val Met Cys	
115 120 125	
cat tta gtt cct ttg tca aat tcg tgt tcg gtg ttt gtg acg agt tgg	432
His Leu Val Pro Leu Ser Asn Ser Cys Ser Val Phe Val Thr Ser Trp	
130 135 140	
agc ctc act gca atc tcc tta gat aaa ttt ctg cat atc aac gat ccc	480
Ser Leu Thr Ala Ile Ser Leu Asp Lys Phe Leu His Ile Asn Asp Pro	
145 150 155 160	
acc aaa caa cca gtt tct att cgt caa gcg ttg gca ata aca ttt ctt	528
Thr Lys Gln Pro Val Ser Ile Arg Gln Ala Leu Ala Ile Thr Phe Leu	
165 170 175	
atc tgg ata gtc tca aca ctg ata aat cta ccg tat ctt atg tct ttc	576
Ile Trp Ile Val Ser Thr Leu Ile Asn Leu Pro Tyr Leu Met Ser Phe	
180 185 190	
gag cac gtc gat gga agc ttt tac gtt cag ccc gga gaa act cca tac	624
Glu His Val Asp Gly Ser Phe Tyr Val Gln Pro Gly Glu Thr Pro Tyr	
195 200 205	
tgc ggg cac ttt tgc gac gag gcg aat tgg cag agc gaa aat agt cga	672

# ATTORNEY DOCKET NO. 6223.N

Cys	Gly	His	Phe	Cys	Asp	Glu	Ala	Asn	Trp	Gln	Ser	Glu	Asn	Ser	Arg	
210						215					220					
aag	att	tac	gga	act	acg	gtt	atg	ttg	tta	cag	ttc	gtc	gtg	ccg	atg	720
Lys	Ile	Tyr	Gly	Thr		Val	Met	Leu	Leu	Gln	Phe	Val	Val	Pro	Met	
225					230					235					240	
gca	gtg	atc	acg	tat	tgc	tac	ttc	aaa	atc	ttg	caa	aaa	gtg	tca	aaa	768
Ala	Val	Ile	Thr	Tyr	Cys	Tyr	Phe	Lys	Ile	Leu	Gln	Lys	Val	Ser	Lys	
				245					250					255		
gac	atg	atc	atc	caa	aat	gct	caa	ttc	tgt	caa	tca	ctg	aca	caa	aag	816
Asp	Met	Ile	Ile	Gln	Asn	Ala	Gln	Phe	Cys	Gln	Ser	Leu	Thr	Gln	Lys	
			260					265					270			
cag	aga	agt	gat	gcg	acg	tca	cga	aag	aag	aaa	gtg	aat	tat	att	cta	864
Gln	Arg	Ser	Asp	Ala	Thr	Ser	Arg	Lys	Lys	Lys	Val	Asn	Tyr	Ile	Leu	
		275					280					285				
att	gca	atg	gtt	gtc	aca	ttt	atc	ggg	tgt	tgg	ttg	cct	tta	aca	tta	912
Ile	Ala	Met	Val	Val	Thr	Phe	Ile	Gly	Cys	Trp	Leu	Pro	Leu	Thr	Leu	
	290					295					300					
ctc	aat	ttg	gtc	aaa	gat	ttt	aaa	aaa	gag	ccc	gaa	tgg	cta	aaa	cgt	960
Leu	Asn	Leu	Val	Lys	Asp	Phe	Lys	Lys	Glu	Pro	Glu	Trp	Leu	Lys	Arg	
305					310					315					320	
cag	ccg	ttc	ttc	tgg	gca	ata	aat	gct	cac	gtc	ata	gcc	atg	tcc	tta	1008
Gln	Pro	Phe	Phe	Trp	Ala	Ile	Asn	Ala	His	Val	Ile	Ala	Met	Ser	Leu	
				325					330					335		
gtc	gtc	tgg	aac	cct	ctg	cta	ttc	ttt	tgg	ctg	aca	cga	aaa	caa	aaa	1056
Val	Val	Trp	Asn	Pro	Leu	Leu	Phe	Phe	Trp	Leu	Thr	Arg	Lys	Gln	Lys	
			340					345					350			
cgt	tcc	gga	ctg	tca	aaa	ata	ctc	aac	tca	aca	gag	att	gtg	tcc	tcg	1104
Arg	Ser	Gly	Leu	Ser	Lys	Ile	Leu	Asn	Ser	Thr	Glu	Ile	Val	Ser	Ser	
		355					360					365				
ttt	gcc	agt	aga	gtg	agt	aac	tcg	att	cgg	cgg	tca	acg	ttt	cgg	aga	1152
Phe	Ala	Ser	Arg	Val	Ser	Asn	Ser	Ile	Arg	Arg	Ser	Thr	Phe	Arg	Arg	
	370					375					380					
aac	aat	att	gac	agg	gtt	cga	aaa	aag	cag	gtg	gtt	ctg	gat	tgc	gag	1200
Asn	Asn	Ile	Asp	Arg	Val	Arg	Lys	Lys	Gln	Val	Val	Leu	Asp	Cys	Glu	
385					390					395					400	
gga	tcc	agc	tac	acg	acc	tcc	tcc	cga	cct	cta	ctc	att	cgg	aca	gat	1248
Gly	Ser	Ser	Tyr	Thr	Thr	Ser	Ser	Arg	Pro	Leu	Leu	Ile	Arg	Thr	Asp	
				405					410					415		
gtg	cag	gca	act	ctt	tct	aat	ggc	tcg	acg	agt	act	acc	cgc	gag	atg	1296
Val	Gln	Ala	Thr	Leu	Ser	Asn	Gly	Ser	Thr	Ser	Thr	Thr	Arg	Glu	Met	
			420					425					430			
ctg	ta															1301
Leu																

<210> 107  
 <211> 433  
 <212> PRT

# ATTORNEY DOCKET NO. 6223.N

<213> Homo sapiens

<400> 107

Met	Val	Ser	Ser	Ala	Ala	Thr	Ile	Ser	Thr	Ile	Ser	Thr	Thr	Thr	Thr		
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Pro	Ser	Thr	Ile	Ser	Asn	Val	Ile	Thr	Ser	His	Ser	Asn	Asn	Gly	Ser		
			20					25					30				
Cys	Ile	Gln	Ile	Ala	Glu	Ala	Ile	Ala	Ala	Gln	Gly	Ile	Asp	Asp	Ile		
		35					40					45					
Thr	Val	Asp	Phe	Tyr	Ile	Arg	Ser	Ile	Phe	Thr	Phe	Leu	Tyr	Gly	Phe		
	50					55					60						
Leu	Phe	Val	Leu	Gly	Ile	Phe	Gly	Asn	Gly	Gly	Val	Leu	Trp	Ala	Val		
65					70					75					80		
Ala	Arg	Asn	Lys	Arg	Leu	Gln	Ser	Ala	Arg	Asn	Val	Phe	Leu	Leu	Asn		
				85					90					95			
Leu	Ile	Phe	Thr	Asp	Leu	Ile	Leu	Val	Phe	Thr	Ala	Ile	Pro	Val	Thr		
			100					105					110				
Pro	Trp	Tyr	Ala	Met	Thr	Lys	Asp	Trp	Ala	Phe	Gly	Ser	Val	Met	Cys		
		115					120					125					
His	Leu	Val	Pro	Leu	Ser	Asn	Ser	Cys	Ser	Val	Phe	Val	Thr	Ser	Trp		
	130					135					140						
Ser	Leu	Thr	Ala	Ile	Ser	Leu	Asp	Lys	Phe	Leu	His	Ile	Asn	Asp	Pro		
145					150					155					160		
Thr	Lys	Gln	Pro	Val	Ser	Ile	Arg	Gln	Ala	Leu	Ala	Ile	Thr	Phe	Leu		
				165					170					175			
Ile	Trp	Ile	Val	Ser	Thr	Leu	Ile	Asn	Leu	Pro	Tyr	Leu	Met	Ser	Phe		
			180					185					190				
Glu	His	Val	Asp	Gly	Ser	Phe	Tyr	Val	Gln	Pro	Gly	Glu	Thr	Pro	Tyr		
		195					200					205					
Cys	Gly	His	Phe	Cys	Asp	Glu	Ala	Asn	Trp	Gln	Ser	Glu	Asn	Ser	Arg		
	210					215					220						
Lys	Ile	Tyr	Gly	Thr	Thr	Val	Met	Leu	Leu	Gln	Phe	Val	Val	Pro	Met		
225					230					235				240			
Ala	Val	Ile	Thr	Tyr	Cys	Tyr	Phe	Lys	Ile	Leu	Gln	Lys	Val	Ser	Lys		
				245					250					255			
Asp	Met	Ile	Ile	Gln	Asn	Ala	Gln	Phe	Cys	Gln	Ser	Leu	Thr	Gln	Lys		
			260					265					270				
Gln	Arg	Ser	Asp	Ala	Thr	Ser	Arg	Lys	Lys	Lys	Val	Asn	Tyr	Ile	Leu		
		275					280					285					
Ile	Ala	Met	Val	Val	Thr	Phe	Ile	Gly	Cys	Trp	Leu	Pro	Leu	Thr	Leu		
	290					295					300						

# ATTORNEY DOCKET NO. 6223.N

Leu Asn Leu Val Lys Asp Phe Lys Lys Glu Pro Glu Trp Leu Lys Arg  
 305 310 315 320  
 Gln Pro Phe Phe Trp Ala Ile Asn Ala His Val Ile Ala Met Ser Leu  
 325 330 335  
 Val Val Trp Asn Pro Leu Leu Phe Phe Trp Leu Thr Arg Lys Gln Lys  
 340 345 350  
 Arg Ser Gly Leu Ser Lys Ile Leu Asn Ser Thr Glu Ile Val Ser Ser  
 355 360 365  
 Phe Ala Ser Arg Val Ser Asn Ser Ile Arg Arg Ser Thr Phe Arg Arg  
 370 375 380  
 Asn Asn Ile Asp Arg Val Arg Lys Lys Gln Val Val Leu Asp Cys Glu  
 385 390 395 400  
 Gly Ser Ser Tyr Thr Thr Ser Ser Arg Pro Leu Leu Ile Arg Thr Asp  
 405 410 415  
 Val Gln Ala Thr Leu Ser Asn Gly Ser Thr Ser Thr Thr Arg Glu Met  
 420 425 430

Leu

<210> 108

<211> 1277

<212> DNA

<213> Homo sapiens

<220>

<223> Clone identifier: CEGPCR21 (F02E8.2)

<220>

<221> CDS

<222> (1)..(1275)

<400> 108

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 Met Thr His Asp Asn Glu Tyr Gln Ser Ala Leu Val Phe Asp Arg Ile  
 1 5 10 15

aga cga tta atc tta aac aac tcg aat acc cca ata acg aca aaa gag 96  
 Arg Arg Leu Ile Leu Asn Asn Ser Asn Thr Pro Ile Thr Thr Lys Glu  
 20 25 30

ctt ata aag cat tgc ttt cat cca gat gtt cag ttt ctt gct cac atg 144  
 Leu Ile Lys His Cys Phe His Pro Asp Val Gln Phe Leu Ala His Met  
 35 40 45

acc ctg aaa tcg ttg gat cat ccc ggt gaa cag ttt aat aat tca tca 192  
 Thr Leu Lys Ser Leu Asp His Pro Gly Glu Gln Phe Asn Asn Ser Ser  
 50 55 60

aat caa ctt tta tta gat cgc gct ttt cta aac cca ata ctc aca ctc 240  
 Asn Gln Leu Leu Leu Asp Arg Ala Phe Leu Asn Pro Ile Leu Thr Leu  
 65 70 75 80

att ttt gtt ttt gtc ggg ctt gtg ggt ctc att ggc aat ttg ctc aca 288  
 Ile Phe Val Phe Val Gly Leu Val Gly Leu Ile Gly Asn Leu Leu Thr  
 85 90 95

# ATTORNEY DOCKET NO. 6223.N

gtt att gtg att ttc aag aca aat tcc ctg cac tcg cac aca aac tat	336
Val Ile Val Ile Phe Lys Thr Asn Ser Leu His Ser His Thr Asn Tyr	
100 105 110	
ttc ttg gca aat ctt gct acc ggc gac ttc tgt ctc atc gtt gtt gga	384
Phe Leu Ala Asn Leu Ala Thr Gly Asp Phe Cys Leu Ile Val Val Gly	
115 120 125	
gtt tcg ttt gac ttg gtg aat atc tgg aac gat gag gaa ccg ctg gac	432
Val Ser Phe Asp Leu Val Asn Ile Trp Asn Asp Glu Glu Pro Leu Asp	
130 135 140	
att ttt gga tat tgc tct ctt aca agc act ttt ata tct ctg ttc aca	480
Ile Phe Gly Tyr Cys Ser Leu Thr Ser Thr Phe Ile Ser Leu Phe Thr	
145 150 155 160	
ttt gct tca att ctc aca att gtt ctt ttg acg gca gaa aga ttt aca	528
Phe Ala Ser Ile Leu Thr Ile Val Leu Leu Thr Ala Glu Arg Phe Thr	
165 170 175	
gcg att tgt tat cct ttt tcc cat aga aca att ttc gac gag aag cgt	576
Ala Ile Cys Tyr Pro Phe Ser His Arg Thr Ile Phe Asp Glu Lys Arg	
180 185 190	
gtt aaa agg ttt ata ctg ctt att tgg ttc gta gca ctt ctt cca tca	624
Val Lys Arg Phe Ile Leu Leu Ile Trp Phe Val Ala Leu Leu Pro Ser	
195 200 205	
att ttc att ggc tct atg ttc aaa cga gtg tct caa gac ttt tgt ggc	672
Ile Phe Ile Gly Ser Met Phe Lys Arg Val Ser Gln Asp Phe Cys Gly	
210 215 220	
ttc aat cgc caa atg act tat atc ggt cga tgt gat ttg gtg aca tct	720
Phe Asn Arg Gln Met Thr Tyr Ile Gly Arg Cys Asp Leu Val Thr Ser	
225 230 235 240	
cca gat agt ttc ttc cgg tac cca ttt gaa tca gca ata acc atc act	768
Pro Asp Ser Phe Phe Arg Tyr Pro Phe Glu Ser Ala Ile Thr Ile Thr	
245 250 255	
ttt gta ctt ccc ttg ttc ttc att att tat tgt tac ttc cgg att cta	816
Phe Val Leu Pro Leu Phe Phe Ile Ile Tyr Cys Tyr Phe Arg Ile Leu	
260 265 270	
gtc aca ttg aac gag atg tcc aat tcg act cat gtg cac act cca gtc	864
Val Thr Leu Asn Glu Met Ser Asn Ser Thr His Val His Thr Pro Val	
275 280 285	
gga act gct cgt agt gat agt gga gct ttt cct ttt ccc cat aca tct	912
Gly Thr Ala Arg Ser Asp Ser Gly Ala Phe Pro Phe Pro His Thr Ser	
290 295 300	
aat aac tct aac act caa agt ttc ccg cta aca gtc cat act aaa aat	960
Asn Asn Ser Asn Thr Gln Ser Phe Pro Leu Thr Val His Thr Lys Asn	
305 310 315 320	
gtc caa ccg ccg cga agt caa caa gcc cag aaa atg gtc att aag atg	1008
Val Gln Pro Pro Arg Ser Gln Gln Ala Gln Lys Met Val Ile Lys Met	
325 330 335	

# ATTORNEY DOCKET NO. 6223.N

ctt gtt act gta acc gct gta ttt ttt gtc tgc tat ctt cca tat cac 1056  
 Leu Val Thr Val Thr Ala Val Phe Phe Val Cys Tyr Leu Pro Tyr His  
 340 345 350

gct caa cgt ctc atc gtc aaa tac aac agc aag gat tgt tcc aac tca 1104  
 Ala Gln Arg Leu Ile Val Lys Tyr Asn Ser Lys Asp Cys Ser Asn Ser  
 355 360 365

gac ttc tgc aag ctt ctc tac cca ata gca gga atc ctc caa tac atc 1152  
 Asp Phe Cys Lys Leu Leu Tyr Pro Ile Ala Gly Ile Leu Gln Tyr Ile  
 370 375 380

tcc gct tct ttg aat cca att ttc tac aac ctc atg tct gta cga ttt 1200  
 Ser Ala Ser Leu Asn Pro Ile Phe Tyr Asn Leu Met Ser Val Arg Phe  
 385 390 395 400

cgc aac gga ttc aag aag ctc atc aaa gac gtc tgg gca cat cga gcc 1248  
 Arg Asn Gly Phe Lys Lys Leu Ile Lys Asp Val Trp Ala His Arg Ala  
 405 410 415

cgt agt tac agc aat cta gct cgt gtc ta 1277  
 Arg Ser Tyr Ser Asn Leu Ala Arg Val  
 420 425

<210> 109  
 <211> 425  
 <212> PRT  
 <213> Homo sapiens

<400> 109  
 Met Thr His Asp Asn Glu Tyr Gln Ser Ala Leu Val Phe Asp Arg Ile  
 1 5 10 15

Arg Arg Leu Ile Leu Asn Asn Ser Asn Thr Pro Ile Thr Thr Lys Glu  
 20 25 30

Leu Ile Lys His Cys Phe His Pro Asp Val Gln Phe Leu Ala His Met  
 35 40 45

Thr Leu Lys Ser Leu Asp His Pro Gly Glu Gln Phe Asn Asn Ser Ser  
 50 55 60

Asn Gln Leu Leu Leu Asp Arg Ala Phe Leu Asn Pro Ile Leu Thr Leu  
 65 70 75 80

Ile Phe Val Phe Val Gly Leu Val Gly Leu Ile Gly Asn Leu Leu Thr  
 85 90 95

Val Ile Val Ile Phe Lys Thr Asn Ser Leu His Ser His Thr Asn Tyr  
 100 105 110

Phe Leu Ala Asn Leu Ala Thr Gly Asp Phe Cys Leu Ile Val Val Gly  
 115 120 125

Val Ser Phe Asp Leu Val Asn Ile Trp Asn Asp Glu Glu Pro Leu Asp  
 130 135 140

Ile Phe Gly Tyr Cys Ser Leu Thr Ser Thr Phe Ile Ser Leu Phe Thr  
 145 150 155 160

Phe	Ala	Ser	Ile	Leu 165	Thr	Ile	Val	Leu	Leu 170	Thr	Ala	Glu	Arg	Phe	Thr 175
Ala	Ile	Cys	Tyr 180	Pro	Phe	Ser	His	Arg 185	Thr	Ile	Phe	Asp	Glu 190	Lys	Arg
Val	Lys	Arg 195	Phe	Ile	Leu	Leu	Ile 200	Trp	Phe	Val	Ala	Leu 205	Leu	Pro	Ser
Ile	Phe 210	Ile	Gly	Ser	Met	Phe 215	Lys	Arg	Val	Ser	Gln 220	Asp	Phe	Cys	Gly
Phe 225	Asn	Arg	Gln	Met	Thr 230	Tyr	Ile	Gly	Arg	Cys 235	Asp	Leu	Val	Thr	Ser 240
Pro	Asp	Ser	Phe	Phe 245	Arg	Tyr	Pro	Phe	Glu 250	Ser	Ala	Ile	Thr	Ile 255	Thr
Phe	Val	Leu	Pro 260	Leu	Phe	Phe	Ile	Ile 265	Tyr	Cys	Tyr	Phe	Arg 270	Ile	Leu
Val	Thr 275	Leu	Asn	Glu	Met	Ser	Asn 280	Ser	Thr	His	Val	His 285	Thr	Pro	Val
Gly	Thr 290	Ala	Arg	Ser	Asp	Ser 295	Gly	Ala	Phe	Pro	Phe 300	Pro	His	Thr	Ser
Asn 305	Asn	Ser	Asn	Thr	Gln 310	Ser	Phe	Pro	Leu	Thr 315	Val	His	Thr	Lys	Asn 320
Val	Gln	Pro	Pro	Arg 325	Ser	Gln	Gln	Ala	Gln 330	Lys	Met	Val	Ile	Lys 335	Met
Leu	Val	Thr	Val 340	Thr	Ala	Val	Phe	Phe 345	Val	Cys	Tyr	Leu	Pro 350	Tyr	His
Ala	Gln	Arg 355	Leu	Ile	Val	Lys	Tyr 360	Asn	Ser	Lys	Asp	Cys 365	Ser	Asn	Ser
Asp	Phe 370	Cys	Lys	Leu	Leu	Tyr 375	Pro	Ile	Ala	Gly	Ile 380	Leu	Gln	Tyr	Ile
Ser 385	Ala	Ser	Leu	Asn	Pro 390	Ile	Phe	Tyr	Asn	Leu 395	Met	Ser	Val	Arg	Phe 400
Arg	Asn	Gly	Phe	Lys 405	Lys	Leu	Ile	Lys	Asp 410	Val	Trp	Ala	His	Arg 415	Ala
Arg	Ser	Tyr	Ser	Asn	Leu	Ala	Arg	Val							

<22.0>

# ATTORNEY DOCKET NO. 6223.N

<221> CDS

<222> (1)..(1308)

<400> 110

atg tct aca aat ttg gtg gac tat gtc gat gat tcg tat ttg aat caa	48
Met Ser Thr Asn Leu Val Asp Tyr Val Asp Asp Ser Tyr Leu Asn Gln	
1 5 10 15	
tca atg aat tca gaa aat gga ttg gat tca gtc aca cag att atg tat	96
Ser Met Asn Ser Glu Asn Gly Leu Asp Ser Val Thr Gln Ile Met Tyr	
20 25 30	
gat atg aaa aag tac aat ata gtg aat gat gtt cta cct cct ccc aat	144
Asp Met Lys Lys Tyr Asn Ile Val Asn Asp Val Leu Pro Pro Pro Asn	
35 40 45	
cac gaa gat cta cat gtt gta ata atg gca gtt tca tac ctt ctt tta	192
His Glu Asp Leu His Val Val Ile Met Ala Val Ser Tyr Leu Leu Leu	
50 55 60	
ttt tta tta ggt act tgt gga aat gtg gca gtg tta act aca ata tac	240
Phe Leu Leu Gly Thr Cys Gly Asn Val Ala Val Leu Thr Thr Ile Tyr	
65 70 75 80	
cat gtt att cga tcg tct cga gcc acg ttg gat aac aca tta ata tat	288
His Val Ile Arg Ser Ser Arg Ala Thr Leu Asp Asn Thr Leu Ile Tyr	
85 90 95	
gtc att gtg ctt tct tgt gtc gac ttc gga gtt tgt ttg tca ctt cca	336
Val Ile Val Leu Ser Cys Val Asp Phe Gly Val Cys Leu Ser Leu Pro	
100 105 110	
att acg gtt att gat cag att ctc ggt ttc tgg atg ttt ggc aaa ata	384
Ile Thr Val Ile Asp Gln Ile Leu Gly Phe Trp Met Phe Gly Lys Ile	
115 120 125	
cca tgt aaa ctt cat gca gta ttc gag aat ttc ggt aaa atc ctg agt	432
Pro Cys Lys Leu His Ala Val Phe Glu Asn Phe Gly Lys Ile Leu Ser	
130 135 140	
gct ctc att ctg acg gca atg agt ttt gat cgg tac gcc gga gtt tgc	480
Ala Leu Ile Leu Thr Ala Met Ser Phe Asp Arg Tyr Ala Gly Val Cys	
145 150 155 160	
cat cca cag cga aaa cgg ttg aga tca agg aat ttt gca att act ata	528
His Pro Gln Arg Lys Arg Leu Arg Ser Arg Asn Phe Ala Ile Thr Ile	
165 170 175	
ctt tta gtt ctt gcc gta tat gca ttc atc aca ctc tgc ccg tta tta	576
Leu Leu Val Leu Ala Val Tyr Ala Phe Ile Thr Leu Cys Pro Leu Leu	
180 185 190	
tgg tct ttt act gca cgg gaa att ata ctt tat gcg aag gaa aca gca	624
Trp Ser Phe Thr Ala Arg Glu Ile Ile Leu Tyr Ala Lys Glu Thr Ala	
195 200 205	
ccc gga atg ctg aca aga atg aaa att gag aaa tgc aca gtg gat atc	672
Pro Gly Met Leu Thr Arg Met Lys Ile Glu Lys Cys Thr Val Asp Ile	
210 215 220	



# ATTORNEY DOCKET NO. 6223.N

gac tca caa atg ttc aca gct ttc acg att tat cag ttc att ctc tgt	720
Asp Ser Gln Met Phe Thr Ala Phe Thr Ile Tyr Gln Phe Ile Leu Cys	
225 230 235 240	
tat tgt act cca ttg gtt ctc atc gcc ttt ttc tat acg aaa ctt ctc	768
Tyr Cys Thr Pro Leu Val Leu Ile Ala Phe Phe Tyr Thr Lys Leu Leu	
245 250 255	
agc aaa ctc cgt gaa cac aca agg acg ttt aag agc tct caa atc cca	816
Ser Lys Leu Arg Glu His Thr Arg Thr Phe Lys Ser Ser Gln Ile Pro	
260 265 270	
ttt ttg cac att tcg ttg tac act cta gca gtt gca tgt ttc tat ttt	864
Phe Leu His Ile Ser Leu Tyr Thr Leu Ala Val Ala Cys Phe Tyr Phe	
275 280 285	
tta tgc tgg acc cca ttc tgg atg gct aca tta ttc gca gtt tat ctc	912
Leu Cys Trp Thr Pro Phe Trp Met Ala Thr Leu Phe Ala Val Tyr Leu	
290 295 300	
gaa aac tca gca aat tcg agt agt gtt cca cca gtt ttt gta tat att	960
Glu Asn Ser Ala Asn Ser Ser Val Pro Pro Val Phe Val Tyr Ile	
305 310 315 320	
atg tat ttt att cat gct cta ccg ttc acc aac tct gcc att aat tgg	1008
Met Tyr Phe Ile His Ala Leu Pro Phe Thr Asn Ser Ala Ile Asn Trp	
325 330 335	
att tta tac ggt gca cta aat ggc caa ctt caa caa aga tat cga tca	1056
Ile Leu Tyr Gly Ala Leu Asn Gly Gln Leu Gln Gln Arg Tyr Arg Ser	
340 345 350	
aat cgt tca aat tct aca aaa aag acg aca aca aca aca gct tca aca	1104
Asn Arg Ser Asn Ser Thr Lys Lys Thr Thr Thr Thr Thr Ala Ser Thr	
355 360 365	
gct tta ttg gaa aag aaa atc aca aat ttg aat act aac tct aat tat	1152
Ala Leu Leu Glu Lys Lys Ile Thr Asn Leu Asn Thr Asn Ser Asn Tyr	
370 375 380	
cag gta aat ggc tca atg aac tca ata gcc act gca gct cca aca aaa	1200
Gln Val Asn Gly Ser Met Asn Ser Ile Ala Thr Ala Ala Pro Thr Lys	
385 390 395 400	
acg att gga aat aat gaa gta ctt gtt gcc acg tca aca att gat gat	1248
Thr Ile Gly Asn Asn Glu Val Leu Val Ala Thr Ser Thr Ile Asp Asp	
405 410 415	
gat gtt gca act gat gtt gta gat gtt cga ctt ttg agt aat cat aat	1296
Asp Val Ala Thr Asp Val Val Asp Val Arg Leu Leu Ser Asn His Asn	
420 425 430	
cca act ttt ctt tg	1310
Pro Thr Phe Leu	
435	

<210> 111

<211> 436

<212> PRT

<213> Homo sapiens

# ATTORNEY DOCKET NO. 6223.N

<400> 111

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			20					25					30				
Asp	Met	Lys	Lys	Tyr	Asn	Ile	Val	Asn	Asp	Val	Leu	Pro	Pro	Pro	Asn		
		35					40					45					
His	Glu	Asp	Leu	His	Val	Val	Ile	Met	Ala	Val	Ser	Tyr	Leu	Leu	Leu		
	50					55					60						
Phe	Leu	Leu	Gly	Thr	Cys	Gly	Asn	Val	Ala	Val	Leu	Thr	Thr	Ile	Tyr		
65					70					75					80		
His	Val	Ile	Arg	Ser	Ser	Arg	Ala	Thr	Leu	Asp	Asn	Thr	Leu	Ile	Tyr		
				85					90					95			
Val	Ile	Val	Leu	Ser	Cys	Val	Asp	Phe	Gly	Val	Cys	Leu	Ser	Leu	Pro		
			100					105					110				
Ile	Thr	Val	Ile	Asp	Gln	Ile	Leu	Gly	Phe	Trp	Met	Phe	Gly	Lys	Ile		
		115					120					125					
Pro	Cys	Lys	Leu	His	Ala	Val	Phe	Glu	Asn	Phe	Gly	Lys	Ile	Leu	Ser		
	130					135					140						
Ala	Leu	Ile	Leu	Thr	Ala	Met	Ser	Phe	Asp	Arg	Tyr	Ala	Gly	Val	Cys		
145					150					155					160		
His	Pro	Gln	Arg	Lys	Arg	Leu	Arg	Ser	Arg	Asn	Phe	Ala	Ile	Thr	Ile		
				165					170					175			
Leu	Leu	Val	Leu	Ala	Val	Tyr	Ala	Phe	Ile	Thr	Leu	Cys	Pro	Leu	Leu		
			180					185					190				
Trp	Ser	Phe	Thr	Ala	Arg	Glu	Ile	Ile	Leu	Tyr	Ala	Lys	Glu	Thr	Ala		
		195				200						205					
Pro	Gly	Met	Leu	Thr	Arg	Met	Lys	Ile	Glu	Lys	Cys	Thr	Val	Asp	Ile		
	210					215					220						
Asp	Ser	Gln	Met	Phe	Thr	Ala	Phe	Thr	Ile	Tyr	Gln	Phe	Ile	Leu	Cys		
225					230					235					240		
Tyr	Cys	Thr	Pro	Leu	Val	Leu	Ile	Ala	Phe	Phe	Tyr	Thr	Lys	Leu	Leu		
				245					250					255			
Ser	Lys	Leu	Arg	Glu	His	Thr	Arg	Thr	Phe	Lys	Ser	Ser	Gln	Ile	Pro		
			260					265					270				
Phe	Leu	His	Ile	Ser	Leu	Tyr	Thr	Leu	Ala	Val	Ala	Cys	Phe	Tyr	Phe		
		275					280					285					
Leu	Cys	Trp	Thr	Pro	Phe	Trp	Met	Ala	Thr	Leu	Phe	Ala	Val	Tyr	Leu		
	290					295					300						
Glu	Asn	Ser	Ala	Asn	Ser	Ser	Ser	Val	Pro	Pro	Val	Phe	Val	Tyr	Ile		
305				310						315					320		
Met	Tyr	Phe	Ile	His	Ala	Leu	Pro	Phe	Thr	Asn	Ser	Ala	Ile	Asn	Trp		

# ATTORNEY DOCKET NO. 6223.N

325                      330                      335  
 Ile Leu Tyr Gly Ala Leu Asn Gly Gln Leu Gln Gln Arg Tyr Arg Ser  
                          340                      345                      350  
 Asn Arg Ser Asn Ser Thr Lys Lys Thr Thr Thr Thr Thr Ala Ser Thr  
                          355                      360                      365  
 Ala Leu Leu Glu Lys Lys Ile Thr Asn Leu Asn Thr Asn Ser Asn Tyr  
                          370                      375                      380  
 Gln Val Asn Gly Ser Met Asn Ser Ile Ala Thr Ala Ala Pro Thr Lys  
 385                                   390                      395                      400  
 Thr Ile Gly Asn Asn Glu Val Leu Val Ala Thr Ser Thr Ile Asp Asp  
                                  405                      410                      415  
 Asp Val Ala Thr Asp Val Val Asp Val Arg Leu Leu Ser Asn His Asn  
                                  420                      425                      430  
 Pro Thr Phe Leu  
                          435

<210> 112  
 <211> 1130  
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<400> 112  
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   1                                 5                                 10                                 15  
 ggt gca tca ttt gca aaa aca gct ata cca tat tca ata tgt ttt gtt 96  
 Gly Ala Ser Phe Ala Lys Thr Ala Ile Pro Tyr Ser Ile Cys Phe Val  
                                  20                                 25                                 30  
 ttt gga act ctc ggc aac acg gcc gtt ctc tcc tac gtt ttc ttc att 144  
 Phe Gly Thr Leu Gly Asn Thr Ala Val Leu Ser Tyr Val Phe Phe Ile  
                                  35                                 40                                 45  
 aca cga tcc cta aaa tca tct gta act gca ctt ggg aac aca ttt att 192  
 Thr Arg Ser Leu Lys Ser Ser Val Thr Ala Leu Gly Asn Thr Phe Ile  
                                  50                                 55                                 60  
 tac atc gtt gca tta tgc gca gtc gat ctt ctt gtc acc gtt tgc att 240  
 Tyr Ile Val Ala Leu Cys Ala Val Asp Leu Leu Val Thr Val Ser Ile  
   65                                 70                                 75                                 80  
 cca ttc tcc cta tcg tac atg att ctc aac aac tgg gta ttc gga gag 288  
 Pro Phe Ser Leu Ser Tyr Met Ile Leu Asn Asn Trp Val Phe Gly Glu  
                                  85                                 90                                 95

# ATTORNEY DOCKET NO. 6223.N

ctg gtg tgc aag atc cac ttt atg ctt gag ctt tct aat aag atg tgc	336
Leu Val Cys Lys Ile His Phe Met Leu Glu Leu Ser Asn Lys Met Cys	
100 105 110	
tcc aca ttc att cta acc gca ctg gca ttt gat cgt tac atg gca ata	384
Ser Thr Phe Ile Leu Thr Ala Leu Ala Phe Asp Arg Tyr Met Ala Ile	
115 120 125	
tgt cat ccg gaa ata aaa cga atc cat gag atg cgt cac acg att tat	432
Cys His Pro Glu Ile Lys Arg Ile His Glu Met Arg His Thr Ile Tyr	
130 135 140	
atc acg aca att ctt gca aca ttg tca ctt ttt ctc ata tct cca gtc	480
Ile Thr Thr Ile Leu Ala Thr Leu Ser Leu Phe Leu Ile Ser Pro Val	
145 150 155 160	
gtt ttg tct gcc aga gtg acg agt ttc aaa agt gga caa tat ttt gtg	528
Val Leu Ser Ala Arg Val Thr Ser Phe Lys Ser Gly Gln Tyr Phe Val	
165 170 175	
agc gca aag aat gaa cgg cac gaa gtt atc cga caa atg tgt att gac	576
Ser Ala Lys Asn Glu Arg His Glu Val Ile Arg Gln Met Cys Ile Asp	
180 185 190	
gga atg gca tta gag tgg aag gtt tgg gtg tct gca ttt ctg atc ttc	624
Gly Met Ala Leu Glu Trp Lys Val Trp Val Ser Ala Phe Leu Ile Phe	
195 200 205	
ttt gca ttc tta ctt cca tgc act ctt cta acc tac ttt tac gcg aag	672
Phe Ala Phe Leu Leu Pro Cys Thr Leu Leu Thr Tyr Phe Tyr Ala Lys	
210 215 220	
atc gtc ctt cgt ctg agg aga caa aga aga aca atg ctc caa tct cga	720
Ile Val Leu Arg Leu Arg Arg Gln Arg Arg Thr Met Leu Gln Ser Arg	
225 230 235 240	
att ccc ctc cgc cgc att aca ata tac aca atg gca gcc acg ttc ttc	768
Ile Pro Leu Arg Arg Ile Thr Ile Tyr Thr Met Ala Ala Thr Phe Phe	
245 250 255	
tat ctt tcg tgt cat att cca ttt tgg ctc cca cag atc tac aac att	816
Tyr Leu Ser Cys His Ile Pro Phe Trp Leu Pro Gln Ile Tyr Asn Ile	
260 265 270	
ttc tcg aca gtt ctt ggg cac aaa atg aat cca aaa gtc atg aca ttc	864
Phe Ser Thr Val Leu Gly His Lys Met Asn Pro Lys Val Met Thr Phe	
275 280 285	
acc tat tat tca cat ctt ctt ccg ttc ata tcg gcg gca ttt aac tgg	912
Thr Tyr Tyr Ser His Leu Leu Pro Phe Ile Ser Ala Ala Phe Asn Trp	
290 295 300	
ata ttc tat gct cga ctt aat agt caa ttc aaa aaa gga ttg gtt cta	960
Ile Phe Tyr Ala Arg Leu Asn Ser Gln Phe Lys Lys Gly Leu Val Leu	
305 310 315 320	
gtt acg gaa aga atg atc aga aag cga aca aaa tcg atg cat gag aaa	1008
Val Thr Glu Arg Met Ile Arg Lys Arg Thr Lys Ser Met His Glu Lys	
325 330 335	

# ATTORNEY DOCKET NO. 6223.N

gga tac agt gag gca gct gtt gag ctt acg agc aag ttc gat gat gtc 1056  
 Gly Tyr Ser Glu Ala Ala Val Glu Leu Thr Ser Lys Phe Asp Asp Val  
                   340                                  345                                  350

cca ttg atg tgt cca cac tgt gaa gct caa ctt tct att cgt tca agt 1104  
 Pro Leu Met Cys Pro His Cys Glu Ala Gln Leu Ser Ile Arg Ser Ser  
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agt aat gga aag aag aat tca aga ta 1130  
 Ser Asn Gly Lys Lys Asn Ser Arg  
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 <212> PRT  
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 Gly Ala Ser Phe Ala Lys Thr Ala Ile Pro Tyr Ser Ile Cys Phe Val  
                   20                                  25                                  30  
 Phe Gly Thr Leu Gly Asn Thr Ala Val Leu Ser Tyr Val Phe Phe Ile  
                   35                                  40                                  45  
 Thr Arg Ser Leu Lys Ser Ser Val Thr Ala Leu Gly Asn Thr Phe Ile  
                   50                                  55                                  60  
 Tyr Ile Val Ala Leu Cys Ala Val Asp Leu Leu Val Thr Val Ser Ile  
                   65                                  70                                  75                                  80  
 Pro Phe Ser Leu Ser Tyr Met Ile Leu Asn Asn Trp Val Phe Gly Glu  
                                   85                                  90                                  95  
 Leu Val Cys Lys Ile His Phe Met Leu Glu Leu Ser Asn Lys Met Cys  
                   100                                  105                                  110  
 Ser Thr Phe Ile Leu Thr Ala Leu Ala Phe Asp Arg Tyr Met Ala Ile  
                   115                                  120                                  125  
 Cys His Pro Glu Ile Lys Arg Ile His Glu Met Arg His Thr Ile Tyr  
                   130                                  135                                  140  
 Ile Thr Thr Ile Leu Ala Thr Leu Ser Leu Phe Leu Ile Ser Pro Val  
                   145                                  150                                  155                                  160  
 Val Leu Ser Ala Arg Val Thr Ser Phe Lys Ser Gly Gln Tyr Phe Val  
                                   165                                  170                                  175  
 Ser Ala Lys Asn Glu Arg His Glu Val Ile Arg Gln Met Cys Ile Asp  
                   180                                  185                                  190  
 Gly Met Ala Leu Glu Trp Lys Val Trp Val Ser Ala Phe Leu Ile Phe  
                   195                                  200                                  205  
 Phe Ala Phe Leu Leu Pro Cys Thr Leu Leu Thr Tyr Phe Tyr Ala Lys

# ATTORNEY DOCKET NO. 6223.N

210	215	220
Ile Val Leu Arg Leu Arg Arg Gln Arg Arg Thr Met Leu Gln Ser Arg 225 230 235 240		
Ile Pro Leu Arg Arg Ile Thr Ile Tyr Thr Met Ala Ala Thr Phe Phe 245 250 255		
Tyr Leu Ser Cys His Ile Pro Phe Trp Leu Pro Gln Ile Tyr Asn Ile 260 265 270		
Phe Ser Thr Val Leu Gly His Lys Met Asn Pro Lys Val Met Thr Phe 275 280 285		
Thr Tyr Tyr Ser His Leu Leu Pro Phe Ile Ser Ala Ala Phe Asn Trp 290 295 300		
Ile Phe Tyr Ala Arg Leu Asn Ser Gln Phe Lys Lys Gly Leu Val Leu 305 310 315 320		
Val Thr Glu Arg Met Ile Arg Lys Arg Thr Lys Ser Met His Glu Lys 325 330 335		
Gly Tyr Ser Glu Ala Ala Val Glu Leu Thr Ser Lys Phe Asp Asp Val 340 345 350		
Pro Leu Met Cys Pro His Cys Glu Ala Gln Leu Ser Ile Arg Ser Ser 355 360 365		
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<210> 114

<211> 1284

<212> DNA

<213> Homo sapiens

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<223> Clone identifier: CEGPCR24a (Y59H11AL.a-01)

<220>

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acg aca gcc tct gaa att atg atg cga aac gaa ccg acg aca act gaa Thr Thr Ala Ser Glu Ile Met Met Arg Asn Glu Pro Thr Thr Thr Glu 20 25 30	96
aat cca gct gtt caa gaa atg aat cat att tat cat ttg aca cca agt Asn Pro Ala Val Gln Glu Met Asn His Ile Tyr His Leu Thr Pro Ser 35 40 45	144
atg aag atg tta tgt att ctt ttc tat agt ata ctt tgc gta tgc tgt Met Lys Met Leu Cys Ile Leu Phe Tyr Ser Ile Leu Cys Val Cys Cys 50 55 60	192

# ATTORNEY DOCKET NO. 6223.N

gtc tat gga aat gtg ctc gtt att ctg gtt att gtt tat ttt aaa cga	240
Val Tyr Gly Asn Val Leu Val Ile Leu Val Ile Val Tyr Phe Lys Arg	
65 70 75 80	
ctt cga acg gcg act aat att ttg ata ttg aac ttg gca gtt gct gat	288
Leu Arg Thr Ala Thr Asn Ile Leu Ile Leu Asn Leu Ala Val Ala Asp	
85 90 95	
ctt ctc ata tca gta ttc tgc att ccg ttc agc tat tgg caa gta ttg	336
Leu Leu Ile Ser Val Phe Cys Ile Pro Phe Ser Tyr Trp Gln Val Leu	
100 105 110	
att tat gat gat caa cgt tgg ctc ttc ggc tca atg atg tgc tct tta	384
Ile Tyr Asp Asp Gln Arg Trp Leu Phe Gly Ser Met Met Cys Ser Leu	
115 120 125	
tta gca ttc ctt caa gca atg gct gta ttt tta tca gct tgg aca ctt	432
Leu Ala Phe Leu Gln Ala Met Ala Val Phe Leu Ser Ala Trp Thr Leu	
130 135 140	
gtc gtt atc agt ttt gat cgg tgg atg gct ata atg ttc ctt tta act	480
Val Val Ile Ser Phe Asp Arg Trp Met Ala Ile Met Phe Leu Leu Thr	
145 150 155 160	
cca aat att cga att aca aga cga aga gct ctt tat ctg gta gct gcc	528
Pro Asn Ile Arg Ile Thr Arg Arg Arg Ala Leu Tyr Leu Val Ala Ala	
165 170 175	
acg tgg ata ttc agt atc cta atg gcg ttg ccg tta ctc ttc aca acg	576
Thr Trp Ile Phe Ser Ile Leu Met Ala Leu Pro Leu Leu Phe Thr Thr	
180 185 190	
aga ttt ttc gaa gac caa gac ggt tta ccg aat tgt gga gaa aat tgg	624
Arg Phe Phe Glu Asp Gln Asp Gly Leu Pro Asn Cys Gly Glu Asn Trp	
195 200 205	
acg tat ttt gga gat tct gga gaa caa gtg aga aaa gtg tat tct tca	672
Thr Tyr Phe Gly Asp Ser Gly Glu Gln Val Arg Lys Val Tyr Ser Ser	
210 215 220	
atg gtc tta att cta caa tat gtt gta cct caa gca gtt tta ata ata	720
Met Val Leu Ile Leu Gln Tyr Val Val Pro Gln Ala Val Leu Ile Ile	
225 230 235 240	
act tac aca cat att gga att aaa atg tgg aat agt cga gta cca gga	768
Thr Tyr Thr His Ile Gly Ile Lys Met Trp Asn Ser Arg Val Pro Gly	
245 250 255	
atg cag aat gga gca aca aag aaa atg atc gtt gat cga cat gaa agt	816
Met Gln Asn Gly Ala Thr Lys Lys Met Ile Val Asp Arg His Glu Ser	
260 265 270	
gtc aaa aag ctg gtc cca atg gtg att ctc att tcg gca ctc ttc gca	864
Val Lys Lys Leu Val Pro Met Val Ile Leu Ile Ser Ala Leu Phe Ala	
275 280 285	
ctt tgt tgg ctt cct tta ctt ata ctg atc aac gtc att cca gaa ttc	912
Leu Cys Trp Leu Pro Leu Leu Ile Leu Ile Asn Val Ile Pro Glu Phe	
290 295 300	

# ATTORNEY DOCKET NO. 6223.N

tat cca gat atc aac agt tgg gga tat att ctg tat ttg tgg tgg ttt	960
Tyr Pro Asp Ile Asn Ser Trp Gly Tyr Ile Leu Tyr Leu Trp Trp Phe	
305 310 315 320	
gct cat gga ctt gcc atg tct cat tca atg gtc aac cca att atc tat	1008
Ala His Gly Leu Ala Met Ser His Ser Met Val Asn Pro Ile Ile Tyr	
325 330 335	
ttc att cga aat gcc cgt ttc cgt gaa gga ttc tgt ttc ttc tct tca	1056
Phe Ile Arg Asn Ala Arg Phe Arg Glu Gly Phe Cys Phe Phe Ser Ser	
340 345 350	
aaa ctt ctt cca tgt ata tca ttt aaa gaa ctt cgt ctt tta act gat	1104
Lys Leu Leu Pro Cys Ile Ser Phe Lys Glu Leu Arg Leu Leu Thr Asp	
355 360 365	
aat act agc aga aga cat cgc tta cga gat att cac gaa gtg gag tcc	1152
Asn Thr Ser Arg Arg His Arg Leu Arg Asp Ile His Glu Val Glu Ser	
370 375 380	
ttg aca ggc aaa cat gtc gtt cgg cac gtt tct tcg aag ccc gac cac	1200
Leu Thr Gly Lys His Val Val Arg His Val Ser Ser Lys Pro Asp His	
385 390 395 400	
tcg tcg tcg tcc gaa aca act ctg cca att ctc tcg cgt agc ttt tcc	1248
Ser Ser Ser Ser Glu Thr Thr Leu Pro Ile Leu Ser Arg Ser Phe Ser	
405 410 415	
cgt atc att aag aaa att gat cta cca tgt act tga	1284
Arg Ile Ile Lys Lys Ile Asp Leu Pro Cys Thr	
420 425	
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20 25 30	
Asn Pro Ala Val Gln Glu Met Asn His Ile Tyr His Leu Thr Pro Ser	
35 40 45	
Met Lys Met Leu Cys Ile Leu Phe Tyr Ser Ile Leu Cys Val Cys Cys	
50 55 60	
Val Tyr Gly Asn Val Leu Val Ile Leu Val Ile Val Tyr Phe Lys Arg	
65 70 75 80	
Leu Arg Thr Ala Thr Asn Ile Leu Ile Leu Asn Leu Ala Val Ala Asp	
85 90 95	
Leu Leu Ile Ser Val Phe Cys Ile Pro Phe Ser Tyr Trp Gln Val Leu	
100 105 110	
Ile Tyr Asp Asp Gln Arg Trp Leu Phe Gly Ser Met Met Cys Ser Leu	



ATTORNEY DOCKET NO. 6223.N

115					120					125					
Leu	Ala	Phe	Leu	Gln	Ala	Met	Ala	Val	Phe	Leu	Ser	Ala	Trp	Thr	Leu
130					135					140					
Val	Val	Ile	Ser	Phe	Asp	Arg	Trp	Met	Ala	Ile	Met	Phe	Leu	Leu	Thr
145					150					155					160
Pro	Asn	Ile	Arg	Ile	Thr	Arg	Arg	Arg	Ala	Leu	Tyr	Leu	Val	Ala	Ala
				165					170					175	
Thr	Trp	Ile	Phe	Ser	Ile	Leu	Met	Ala	Leu	Pro	Leu	Leu	Phe	Thr	Thr
			180					185					190		
Arg	Phe	Phe	Glu	Asp	Gln	Asp	Gly	Leu	Pro	Asn	Cys	Gly	Glu	Asn	Trp
		195					200					205			
Thr	Tyr	Phe	Gly	Asp	Ser	Gly	Glu	Gln	Val	Arg	Lys	Val	Tyr	Ser	Ser
	210					215					220				
Met	Val	Leu	Ile	Leu	Gln	Tyr	Val	Val	Pro	Gln	Ala	Val	Leu	Ile	Ile
225					230					235					240
Thr	Tyr	Thr	His	Ile	Gly	Ile	Lys	Met	Trp	Asn	Ser	Arg	Val	Pro	Gly
				245					250					255	
Met	Gln	Asn	Gly	Ala	Thr	Lys	Lys	Met	Ile	Val	Asp	Arg	His	Glu	Ser
			260					265					270		
Val	Lys	Lys	Leu	Val	Pro	Met	Val	Ile	Leu	Ile	Ser	Ala	Leu	Phe	Ala
		275					280					285			
Leu	Cys	Trp	Leu	Pro	Leu	Leu	Ile	Leu	Ile	Asn	Val	Ile	Pro	Glu	Phe
	290					295					300				
Tyr	Pro	Asp	Ile	Asn	Ser	Trp	Gly	Tyr	Ile	Leu	Tyr	Leu	Trp	Trp	Phe
305					310					315					320
Ala	His	Gly	Leu	Ala	Met	Ser	His	Ser	Met	Val	Asn	Pro	Ile	Ile	Tyr
				325					330					335	
Phe	Ile	Arg	Asn	Ala	Arg	Phe	Arg	Glu	Gly	Phe	Cys	Phe	Phe	Ser	Ser
			340					345					350		
Lys	Leu	Leu	Pro	Cys	Ile	Ser	Phe	Lys	Glu	Leu	Arg	Leu	Leu	Thr	Asp
		355					360					365			
Asn	Thr	Ser	Arg	Arg	His	Arg	Leu	Arg	Asp	Ile	His	Glu	Val	Glu	Ser
					375						380				
Leu	Thr	Gly	Lys	His	Val	Val	Arg	His	Val	Ser	Ser	Lys	Pro	Asp	His
385					390					395					400
Ser	Ser	Ser	Ser	Glu	Thr	Thr	Leu	Pro	Ile	Leu	Ser	Arg	Ser	Phe	Ser
				405					410					415	
Arg	Ile	Ile	Lys	Lys	Ile	Asp	Leu	Pro	Cys	Thr					
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<211> 1305

# ATTORNEY DOCKET NO. 6223.N

<212> DNA

<213> Homo sapiens

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<223> Clone identifier: CEGPCR24b (Y59H11A1.a-02)

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<221> CDS

<222> (1) .. (1302)

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acg aca gcc tct gaa att atg atg cga aac gaa ccg acg aca act gaa	96
Thr Thr Ala Ser Glu Ile Met Met Arg Asn Glu Pro Thr Thr Thr Glu	
20 25 30	
aat cca gct gtt caa gaa atg aat cat att tat cat ttg aca cca agt	144
Asn Pro Ala Val Gln Glu Met Asn His Ile Tyr His Leu Thr Pro Ser	
35 40 45	
atg aag atg tta tgt att ctt ttc tat agt ata ctt tgc gta tgc tgt	192
Met Lys Met Leu Cys Ile Leu Phe Tyr Ser Ile Leu Cys Val Cys Cys	
50 55 60	
gtc tat gga aat gtg ctc gtt att ctg gtt att gtt tat ttt aaa cga	240
Val Tyr Gly Asn Val Leu Val Ile Leu Val Ile Val Tyr Phe Lys Arg	
65 70 75 80	
ctt cga acg gcg act aat att ttg ata ttg aac ttg gca gtt gct gat	288
Leu Arg Thr Ala Thr Asn Ile Leu Ile Leu Asn Leu Ala Val Ala Asp	
85 90 95	
ctt ctc ata tca gta ttc tgc att ccg ttc agc tat tgg caa gta ttg	336
Leu Leu Ile Ser Val Phe Cys Ile Pro Phe Ser Tyr Trp Gln Val Leu	
100 105 110	
att tat gat gat caa cgt tgg ctc ttc ggc tca atg atg tgc tct tta	384
Ile Tyr Asp Asp Gln Arg Trp Leu Phe Gly Ser Met Met Cys Ser Leu	
115 120 125	
tta gca ttc ctt caa gca atg gct gta ttt tta tca gct tgg aca ctt	432
Leu Ala Phe Leu Gln Ala Met Ala Val Phe Leu Ser Ala Trp Thr Leu	
130 135 140	
gtc gtt atc agt ttt gat cgg tgg atg gct ata atg ttc ctt tta act	480
Val Val Ile Ser Phe Asp Arg Trp Met Ala Ile Met Phe Leu Leu Thr	
145 150 155 160	
cca aat att cga att aca aga cga aga gct ctt tat ctg gta gct gcc	528
Pro Asn Ile Arg Ile Thr Arg Arg Arg Ala Leu Tyr Leu Val Ala Ala	
165 170 175	
acg tgg ata ttc agt atc cta atg gcg ttg ccg tta ctc ttc aca acg	576
Thr Trp Ile Phe Ser Ile Leu Met Ala Leu Pro Leu Leu Phe Thr Thr	
180 185 190	
aga ttt ttc gaa gac caa gac ggt tta ccg aat tgt gga gaa aat tgg	624
Arg Phe Phe Glu Asp Gln Asp Gly Leu Pro Asn Cys Gly Glu Asn Trp	
195 200 205	

# ATTORNEY DOCKET NO. 6223.N

acg tat ttt gga gat tct gga gaa caa gtg aga aaa gtg tat tct tca	672
Thr Tyr Phe Gly Asp Ser Gly Glu Gln Val Arg Lys Val Tyr Ser Ser	
210 215 220	
atg gtc tta att cta caa tat gtt gta cct caa gca gtt tta ata ata	720
Met Val Leu Ile Leu Gln Tyr Val Val Pro Gln Ala Val Leu Ile Ile	
225 230 235 240	
act tac aca cat att gga att aaa atg tgg aat agt cga gta cca gga	768
Thr Tyr Thr His Ile Gly Ile Lys Met Trp Asn Ser Arg Val Pro Gly	
245 250 255	
atg cag aat gga gca aca aag aaa atg atc gtt gat cga cat gaa agt	816
Met Gln Asn Gly Ala Thr Lys Lys Met Ile Val Asp Arg His Glu Ser	
260 265 270	
gtc aaa aag ctg gtc cca atg gtg att ctc att tcg gca ctc ttc gca	864
Val Lys Lys Leu Val Pro Met Val Ile Leu Ile Ser Ala Leu Phe Ala	
275 280 285	
ctt tgt tgg ctt cct tta ctt ata ctg atc aac gtc att cca gaa ttc	912
Leu Cys Trp Leu Pro Leu Leu Ile Leu Ile Asn Val Ile Pro Glu Phe	
290 295 300	
tat cca gat atc aac agt tgg gga tat att ctg tat ttg tgg tgg ttt	960
Tyr Pro Asp Ile Asn Ser Trp Gly Tyr Ile Leu Tyr Leu Trp Trp Phe	
305 310 315 320	
gct cat gga ctt gcc atg tct cat tca atg gtc aac cca att atc tat	1008
Ala His Gly Leu Ala Met Ser His Ser Met Val Asn Pro Ile Ile Tyr	
325 330 335	
ttc att cga aat gcc cgt ttc cgt gaa gga ttc tgt ttc ttc tct tca	1056
Phe Ile Arg Asn Ala Arg Phe Arg Glu Gly Phe Cys Phe Phe Ser Ser	
340 345 350	
aaa ctt ctt cca tgt ata tca ttt aaa gaa ctt cgt ctt tta act gat	1104
Lys Leu Leu Pro Cys Ile Ser Phe Lys Glu Leu Arg Leu Leu Thr Asp	
355 360 365	
aat act agc aga agt ttt cga aac cgt tca cgg ttt tct ggt gtc ata	1152
Asn Thr Ser Arg Ser Phe Arg Asn Arg Ser Arg Phe Ser Gly Val Ile	
370 375 380	
aat ccg act tca agc gat gaa aaa cct gct aca tcg ctt acg aga tat	1200
Asn Pro Thr Ser Ser Asp Glu Lys Pro Ala Thr Ser Leu Thr Arg Tyr	
385 390 395 400	
tca cga agt gga gtc ctt gac agg caa aca tgt cgt tcg gca cgt ttc	1248
Ser Arg Ser Gly Val Leu Asp Arg Gln Thr Cys Arg Ser Ala Arg Phe	
405 410 415	
ttc gaa gcc cga cca ctc gtc gtc gtc cga aac aac tct gcc aat tct	1296
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Leu Ala	

# ATTORNEY DOCKET NO. 6223.N

<210> 117

<211> 434

<212> PRT

<213> Homo sapiens

<400> 117

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20 25 30

Asn Pro Ala Val Gln Glu Met Asn His Ile Tyr His Leu Thr Pro Ser  
35 40 45

Met Lys Met Leu Cys Ile Leu Phe Tyr Ser Ile Leu Cys Val Cys Cys  
50 55 60

Val Tyr Gly Asn Val Leu Val Ile Leu Val Ile Val Tyr Phe Lys Arg  
65 70 75 80

Leu Arg Thr Ala Thr Asn Ile Leu Ile Leu Asn Leu Ala Val Ala Asp  
85 90 95

Leu Leu Ile Ser Val Phe Cys Ile Pro Phe Ser Tyr Trp Gln Val Leu  
100 105 110

Ile Tyr Asp Asp Gln Arg Trp Leu Phe Gly Ser Met Met Cys Ser Leu  
115 120 125

Leu Ala Phe Leu Gln Ala Met Ala Val Phe Leu Ser Ala Trp Thr Leu  
130 135 140

Val Val Ile Ser Phe Asp Arg Trp Met Ala Ile Met Phe Leu Leu Thr  
145 150 155 160

Pro Asn Ile Arg Ile Thr Arg Arg Arg Ala Leu Tyr Leu Val Ala Ala  
165 170 175

Thr Trp Ile Phe Ser Ile Leu Met Ala Leu Pro Leu Leu Phe Thr Thr  
180 185 190

Arg Phe Phe Glu Asp Gln Asp Gly Leu Pro Asn Cys Gly Glu Asn Trp  
195 200 205

Thr Tyr Phe Gly Asp Ser Gly Glu Gln Val Arg Lys Val Tyr Ser Ser  
210 215 220

Met Val Leu Ile Leu Gln Tyr Val Val Pro Gln Ala Val Leu Ile Ile  
225 230 235 240

Thr Tyr Thr His Ile Gly Ile Lys Met Trp Asn Ser Arg Val Pro Gly  
245 250 255

Met Gln Asn Gly Ala Thr Lys Lys Met Ile Val Asp Arg His Glu Ser  
260 265 270

Val Lys Lys Leu Val Pro Met Val Ile Leu Ile Ser Ala Leu Phe Ala  
275 280 285

Leu Cys Trp Leu Pro Leu Leu Ile Leu Ile Asn Val Ile Pro Glu Phe

# ATTORNEY DOCKET NO. 6223.N

290	295	300
Tyr Pro Asp Ile Asn Ser Trp Gly Tyr Ile Leu Tyr Leu Trp Trp Phe 305 310 315 320		
Ala His Gly Leu Ala Met Ser His Ser Met Val Asn Pro Ile Ile Tyr 325 330 335		
Phe Ile Arg Asn Ala Arg Phe Arg Glu Gly Phe Cys Phe Phe Ser Ser 340 345 350		
Lys Leu Leu Pro Cys Ile Ser Phe Lys Glu Leu Arg Leu Leu Thr Asp 355 360 365		
Asn Thr Ser Arg Ser Phe Arg Asn Arg Ser Arg Phe Ser Gly Val Ile 370 375 380		
Asn Pro Thr Ser Ser Asp Glu Lys Pro Ala Thr Ser Leu Thr Arg Tyr 385 390 395 400		
Ser Arg Ser Gly Val Leu Asp Arg Gln Thr Cys Arg Ser Ala Arg Phe 405 410 415		
Phe Glu Ala Arg Pro Leu Val Val Val Arg Asn Asn Ser Ala Asn Ser 420 425 430		
Leu Ala		

<210> 118  
 <211> 10  
 <212> PRT  
 <213> A. suum/C. elegans (flp21 modified)

<220>  
 <221> SITE  
 <222> (1)  
 <223> Xaa=IodoY

<220>  
 <221> MOD\_RES  
 <222> (10)  
 <223> AMIDATION

<220>  
 <223> [I]Y AF9

<400> 118  
 Xaa Gly Leu Gly Pro Arg Pro Leu Arg Phe  
 1 5 10

<210> 119  
 <211> 9  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Synthetic analog

ATTORNEY DOCKET NO. 6223.N

<220>  
<221> SITE  
<222> (1)  
<223> Xaa=IodoY

<220>  
<221> MOD\_RES  
<222> (9)  
<223> AMIDATION

<400> 119  
Xaa Asp Val Pro Gly Val Leu Arg Phe  
1 5

<210> 120  
<211> 12  
<212> PRT  
<213> C. elegans/flp 18

<220>  
<221> MOD\_RES  
<222> (12)  
<223> AMIDATION

<400> 120  
Asp Phe Asp Gly Ala Met Pro Gly Val Leu Arg Phe  
1 5 10

<210> 121  
<211> 8  
<212> PRT  
<213> C. elegans/flp 18

<220>  
<221> MOD\_RES  
<222> (8)  
<223> AMIDATION

<400> 121  
Glu Ile Pro Gly Val Leu Arg Phe  
1 5

<210> 122  
<211> 7  
<212> PRT  
<213> Drosophila

<220>  
<221> MOD\_RES  
<222> (7)  
<223> AMIDATION

<400> 122  
Ser Asp Asn Phe Met Arg Phe  
1 5

<210> 123  
<211> 7

# ATTORNEY DOCKET NO. 6223.N

<212> PRT  
<213> Drosophila

<220>  
<221> MOD\_RES  
<222> (7)  
<223> AMIDATION

<400> 123  
Pro Asp Asn Phe Met Arg Phe  
1 5

<210> 124  
<211> 0  
<212> PRT  
<213> synthetic

<400> 124  
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<210> 125  
<211> 10  
<212> PRT  
<213> [Y] AF9 analog

<220>  
<221> MOD\_RES  
<222> (10)  
<223> AMIDATION

<400> 125  
Tyr Gly Leu Gly Pro Arg Pro Leu Arg Phe  
1 5 10

<210> 126  
<211> 4  
<212> PRT  
<213> Leech

<220>  
<221> MOD\_RES  
<222> (4)  
<223> AMIDATION

<400> 126  
Tyr Leu Arg Phe  
1

<210> 127  
<211> 8  
<212> PRT  
<213> Lobster

<220>  
<221> MOD\_RES  
<222> (8)  
<223> AMIDATION

# ATTORNEY DOCKET NO. 6223.N

<400> 127  
Ser Asp Arg Asn Phe Leu Arg Phe  
1 5

<210> 128  
<211> 4  
<212> PRT  
<213> Trematoda

<220>  
<221> MOD\_RES  
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<223> AMIDATION

<400> 128  
Phe Leu Arg Phe  
1

<210> 129  
<211> 4  
<212> PRT  
<213> Mollusca

<220>  
<221> MOD\_RES  
<222> (4)  
<223> AMIDATION

<400> 129  
Phe Met Arg Phe  
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<210> 130  
<211> 0  
<212> PRT  
<213> synthetic

<400> 130  
000

<210> 131  
<211> 7  
<212> PRT  
<213> Manduca

<220>  
<221> MOD\_RES  
<222> (7)  
<223> AMIDATION

<400> 131  
Asp Pro Ser Phe Leu Arg Phe  
1 5

<210> 132  
<211> 0  
<212> PRT



ATTORNEY DOCKET NO. 6223.N

<213> synthetic

<400> 132  
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<210> 133  
<211> 8  
<212> PRT  
<213> A. suum

<220>  
<221> MOD\_RES  
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<400> 133  
Ala Gly Pro Arg Phe Ile Arg Phe  
1 5

<210> 134  
<211> 0  
<212> PRT  
<213> synthetic

<400> 134  
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<210> 135  
<211> 7  
<212> PRT  
<213> C. elegans (flp 1)

<220>  
<221> MOD\_RES  
<222> (7)  
<223> AMIDATION

<400> 135  
Lys Pro Asn Phe Leu Arg Tyr  
1 5

<210> 136  
<211> 10  
<212> PRT  
<213> L. decemlineata

<220>  
<221> MOD\_RES  
<222> (10)  
<223> AMIDATION

<400> 136  
Ala Arg Gly Pro Gln Leu Arg Leu Arg Phe  
1 5 10

<210> 137

ATTORNEY DOCKET NO. 6223.N

<211> 4  
<212> PRT  
<213> Trematoda

<220>  
<221> MOD\_RES  
<222> (4)  
<223> AMIDATION

<400> 137  
Tyr Ile Arg Phe  
1

<210> 138  
<211> 0  
<212> PRT  
<213> synthetic

<400> 138  
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<210> 139  
<211> 8  
<212> PRT  
<213> C. elegans (flp 5)

<220>  
<221> MOD\_RES  
<222> (8)  
<223> AMIDATION

<400> 139  
Ala Gly Ala Lys Phe Ile Arg Phe  
1 5

<210> 140  
<211> 0  
<212> PRT  
<213> synthetic

<400> 140  
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<210> 141  
<211> 7  
<212> PRT  
<213> C. elegans (flp 14)

<220>  
<221> MOD\_RES  
<222> (7)  
<223> AMIDATION

<400> 141  
Lys His Glu Tyr Leu Arg Phe  
1 5

ATTORNEY DOCKET NO. 6223.N

<210> 142  
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<213> synthetic

<400> 142  
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<210> 143  
<211> 8  
<212> PRT  
<213> C. elegans flp3

<220>  
<221> MOD\_RES  
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<223> AMIDATION

<400> 143  
Ser Pro Leu Gly Thr Met Arg Phe  
1 5

<210> 144  
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<400> 144  
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<210> 145  
<211> 0  
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<400> 145  
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<210> 146  
<211> 0  
<212> PRT  
<213> synthetic

<400> 146  
000

<210> 147  
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<400> 147  
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ATTORNEY DOCKET NO. 6223.N

<210> 148  
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<400> 148  
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<210> 149  
<211> 0  
<212> PRT  
<213> synthetic

<400> 149  
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<210> 150  
<211> 11  
<212> PRT  
<213> A. suum

<220>  
<221> MOD\_RES  
<222> (11)  
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<400> 150  
Ala Glu Gly Leu Ser Ser Pro Leu Ile Arg Phe  
1 5 10

<210> 151  
<211> 8  
<212> PRT  
<213> A. suum

<220>  
<221> MOD\_RES  
<222> (8)  
<223> AMIDATION

<400> 151  
Phe Asp Arg Asp Phe Met His Phe  
1 5

<210> 152  
<211> 4  
<212> PRT  
<213> Artificial Sequence

<220>  
<221> MOD\_RES  
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<223> AMIDATION

<220>  
<223> Description of Artificial Sequence: synthetic  
analog

ATTORNEY DOCKET NO. 6223.N

<400> 152  
Val Leu Arg Phe  
1

<210> 153  
<211> 5  
<212> PRT  
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<220>  
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<223> AMIDATION

<220>  
<223> Description of Artificial Sequence: synthetic  
analog

<400> 153  
Gly Val Leu Arg Phe  
1 5

<210> 154  
<211> 5  
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<220>  
<221> MOD\_RES  
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<223> AMIDATION

<220>  
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<222> (1)  
<223> ACETYLATION

<220>  
<223> Description of Artificial Sequence: synthetic  
analog

<400> 154  
Gly Val Leu Arg Phe  
1 5

<210> 155  
<211> 6  
<212> PRT  
<213> Artificial Sequence

<220>  
<221> MOD\_RES  
<222> (6)  
<223> AMIDATION

<220>  
<223> Description of Artificial Sequence: synthetic  
analog

ATTORNEY DOCKET NO. 6223.N

<400> 155  
Pro Gly Val Leu Arg Phe  
1 5

<210> 156  
<211> 7  
<212> PRT  
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<220>  
<221> MOD\_RES  
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<223> AMIDATION

<220>  
<223> Description of Artificial Sequence: synthetic  
analog

<400> 156  
Val Pro Gly Val Leu Arg Phe  
1 5

<210> 157  
<211> 7  
<212> PRT  
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<220>  
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<223> ACETYLATION

<220>  
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<222> (7)  
<223> AMIDATION

<220>  
<223> Description of Artificial Sequence: synthetic  
analog

<400> 157  
Val Pro Gly Val Leu Arg Phe  
1 5

<210> 158  
<211> 9  
<212> PRT  
<213> Artificial Sequence

<220>  
<221> MOD\_RES  
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<223> AMIDATION

<220>  
<223> Description of Artificial Sequence: synthetic  
analog

ATTORNEY DOCKET NO. 6223.N

<400> 158  
Tyr Asp Val Pro Gly Val Leu Arg Phe  
1 5

<210> 159  
<211> 8  
<212> PRT  
<213> Artificial Sequence

<220>  
<221> MOD\_RES  
<222> (8)  
<223> AMIDATION

<220>  
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analog

<400> 159  
Tyr Val Pro Gly Val Leu Arg Phe  
1 5

<210> 160  
<211> 8  
<212> PRT  
<213> Artificial Sequence

<220>  
<221> MOD\_RES  
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<223> AMIDATION

<220>  
<221> SITE  
<222> (1)  
<223> Xaa=3-Iodo-Y

<220>  
<223> Description of Artificial Sequence: synthetic  
analog

<400> 160  
Xaa Val Pro Gly Val Leu Arg Phe  
1 5

<210> 161  
<211> 7  
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<220>  
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<222> (7)  
<223> AMIDATION

<220>  
<223> Description of Artificial Sequence: synthetic  
analog

ATTORNEY DOCKET NO. 6223.N

<400> 161  
Tyr Pro Gly Val Leu Arg Phe  
1 5

<210> 162  
<211> 7  
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<220>  
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<223> Xaa= 3-Iodo-Y

<220>  
<223> Description of Artificial Sequence: synthetic  
analog

<400> 162  
Xaa Pro Gly Val Leu Arg Phe  
1 5

<210> 163  
<211> 6  
<212> PRT  
<213> Artificial Sequence

<220>  
<221> MOD\_RES  
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<223> AMIDATION

<220>  
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analog

<400> 163  
Tyr Gly Val Leu Arg Phe  
1 5

<210> 164  
<211> 6  
<212> PRT  
<213> Artificial Sequence

<220>  
<221> SITE  
<222> (1)  
<223> Xaa=3-Iodo-Y

<220>  
<221> MOD\_RES  
<222> (6)  
<223> AMIDATION



ATTORNEY DOCKET NO. 6223.N

<220>  
<223> Description of Artificial Sequence: synthetic  
analog

<400> 164  
Xaa Gly Val Leu Arg Phe  
1 5

<210> 165  
<211> 7  
<212> PRT  
<213> P. redivivus

<220>  
<221> MOD\_RES  
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<223> AMIDATION

<220>  
<223> PF4

<400> 165  
Lys Pro Asn Phe Ile Arg Phe  
1 5

<210> 166  
<211> 8  
<212> PRT  
<213> C. elegans flp1

<220>  
<221> MOD\_RES  
<222> (8)  
<223> AMIDATION

<400> 166  
Ser Gln Pro Asn Phe Leu Arg Phe  
1 5

<210> 167  
<211> 8  
<212> PRT  
<213> H. contortus

<220>  
<221> MOD\_RES  
<222> (8)  
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<400> 167  
Leu Gln Pro Asn Phe Leu Arg Phe  
1 5

<210> 168  
<211> 0  
<212> PRT  
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ATTORNEY DOCKET NO. 6223.N

<220>  
<223> Description of Artificial Sequence: synthetic  
analog

<400> 168  
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<210> 169  
<211> 0  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: synthetic  
analog

<400> 169  
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<210> 170  
<211> 0  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: synthetic  
analog

<400> 170  
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<210> 171  
<211> 25  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> SCN162

<220>  
<223> Description of Artificial Sequence: synthetic

<400> 171  
acgtttaaga gctctcaa at cccat

25

<210> 172  
<211> 25  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> SCN160

<220>  
<223> Description of Artificial Sequence: synthetic\

<400> 172  
ccagagctca tcaaaactca aga at

25

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<210> 173  
 <211> 31  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> DEL-1850 (CEGPCR12c\_F.2)

<220>  
 <223> Description of Artificial Sequence: primer

<400> 173  
 gccgccatgt cgaatgatct cgtgccttca g 31

<210> 174  
 <211> 25  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> SCN189

<220>  
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<400> 174  
 ttacaattta aaactaggtg cttct 25

<210> 175  
 <211> 31  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> SCN199

<220>  
 <223> Description of Artificial Sequence: synthetic

<400> 175  
 gccgccatga acttttcggc caccgattcg a 31

<210> 176  
 <211> 1233  
 <212> DNA  
 <213> C. elegans

<220>  
 <221> CDS  
 <222> (1)..(1230)

<220>  
 <223> CFGPCR2

<400> 176  
 atg gcc cgt gca gtc aac ata tct cca ttc gct tct tat aca gtc gta 48  
 Met Ala Arg Ala Val Asn Ile Ser Pro Phe Ala Ser Tyr Thr Val Val  
 1 5 10 15

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cca att acc tcg gca tgg cca ccg gac gac ttg aaa gcc gat cga gtt Pro Ile Thr Ser Ala Trp Pro Pro Asp Asp Leu Lys Ala Asp Arg Val 20 25 30	96
caa ctt gcc agt ttc acg act gga aaa gct ctg cta gcc att gcc att Gln Leu Ala Ser Phe Thr Thr Gly Lys Ala Leu Leu Ala Ile Ala Ile 35 40 45	144
ctt gca atg att att atg aca acg gtc ggc aat gcg ctg gtt tgc tta Leu Ala Met Ile Ile Met Thr Val Gly Asn Ala Leu Val Cys Leu 50 55 60	192
gca gtt tta ctg gta cga aag ttg aaa cat cct caa aat ttt ctt ttg Ala Val Leu Leu Val Arg Lys Leu Lys His Pro Gln Asn Phe Leu Leu 65 70 75 80	240
gtc tca ctg gca gtg gcg gac ttt ttc gtg ggg ctc gtt gtg atg cca Val Ser Leu Ala Val Ala Asp Phe Phe Val Gly Leu Val Val Met Pro 85 90 95	288
ctt gca ctg att gac ctt ctc ttc gat aaa tgg cca ctt gga agc acc Leu Ala Leu Ile Asp Leu Leu Phe Asp Lys Trp Pro Leu Gly Ser Thr 100 105 110	336
atg tgt tcg gtg tac aca aca tcc gac cta acg cta tgc act gct tca Met Cys Ser Val Tyr Thr Thr Ser Asp Leu Thr Leu Cys Thr Ala Ser 115 120 125	384
att gtg aat ctg tgt gca ata tca gtt gat aga tat ctg gtg att tca Ile Val Asn Leu Cys Ala Ile Ser Val Asp Arg Tyr Leu Val Ile Ser 130 135 140	432
agt cca ctt cgg tat tct gca aaa cga aca act aaa cgt atc atg atg Ser Pro Leu Arg Tyr Ser Ala Lys Arg Thr Thr Lys Arg Ile Met Met 145 150 155 160	480
tat att gcc tgt gta tgg atc atc gct gcc att gtg agc att tcg tcg Tyr Ile Ala Cys Val Trp Ile Ile Ala Ala Ile Val Ser Ile Ser Ser 165 170 175	528
cac att atc gca aat ctt ctg aac gac ggc act tat gtc gat gac acg His Ile Ile Ala Asn Leu Leu Asn Asp Gly Thr Tyr Val Asp Asp Thr 180 185 190	576
gga act tgt cag gtc atc cct cat ttc atc tat caa agc tat gct aca Gly Thr Cys Gln Val Ile Pro His Phe Ile Tyr Gln Ser Tyr Ala Thr 195 200 205	624
att atc tca ttc tat gcg cca aca ttt atc atg gtc atc ttg aac atc Ile Ile Ser Phe Tyr Ala Pro Thr Phe Ile Met Val Ile Leu Asn Ile 210 215 220	672
aaa att tgg cga gca gca aaa cga ttg gca gct caa gac agg ttg atg Lys Ile Trp Arg Ala Ala Lys Arg Leu Ala Ala Gln Asp Arg Leu Met 225 230 235 240	720
tct cac tgt aac tct gtg gat gcc tcc gaa cgg cca cga aat gga tca Ser His Cys Asn Ser Val Asp Ala Ser Glu Arg Pro Arg Asn Gly Ser 245 250 255	768
gct gag aca aag gat ttc ctg aat gag aaa gaa aca att gat gtt ccg	816

# ATTORNEY DOCKET NO. 6223.N

Ala	Glu	Thr	Lys	Asp	Phe	Leu	Asn	Glu	Lys	Glu	Thr	Ile	Asp	Val	Pro		
			260					265					270				
aaa	aaa	gag	cgg	gcc	aat	tca	aca	aac	tcg	agg	ctt	ttc	aag	ttg	gaa	864	
Lys	Lys	Glu	Arg	Ala	Asn	Ser	Thr	Asn	Ser	Arg	Leu	Phe	Lys	Leu	Glu		
		275					280					285					
cgt	aaa	tat	ctt	cat	cga	ccc	agt	gca	ttc	ttt	tcg	gct	gca	aaa	gga	912	
Arg	Lys	Tyr	Leu	His	Arg	Pro	Ser	Ala	Phe	Phe	Ser	Ala	Ala	Lys	Gly		
	290					295					300						
cca	ttg	att	cgg	cag	acg	gag	aaa	agt	gaa	tgc	aaa	gcc	cgg	aaa	aca	960	
Pro	Leu	Ile	Arg	Gln	Thr	Glu	Lys	Ser	Glu	Cys	Lys	Ala	Arg	Lys	Thr		
305					310					315					320		
ttg	ggg	gtc	atc	atg	tca	gtg	ttc	att	att	tgc	tgg	ctc	cca	ttc	ttc	1008	
Leu	Gly	Val	Ile	Met	Ser	Val	Phe	Ile	Ile	Cys	Trp	Leu	Pro	Phe	Phe		
				325					330					335			
att	ctt	gcc	ata	ttc	aag	tct	ttc	ggc	atg	tgg	atc	ccg	gat	tgg	ttg	1056	
Ile	Leu	Ala	Ile	Phe	Lys	Ser	Phe	Gly	Met	Trp	Ile	Pro	Asp	Trp	Leu		
			340					345					350				
gat	ctg	cta	gca	ctg	tgg	tta	ggc	tac	tca	aat	agc	aca	tta	aat	cca	1104	
Asp	Leu	Leu	Ala	Leu	Trp	Leu	Gly	Tyr	Ser	Asn	Ser	Thr	Leu	Asn	Pro		
		355					360					365					
ttg	atc	tac	tgc	aag	tac	aac	aaa	gag	ttt	cga	ata	cca	ttc	cgt	gaa	1152	
Leu	Ile	Tyr	Cys	Lys	Tyr	Asn	Lys	Glu	Phe	Arg	Ile	Pro	Phe	Arg	Glu		
	370					375					380						
atg	ctt	gct	tgt	cgc	tgt	gct	act	tta	cag	act	gta	atg	cga	caa	caa	1200	
Met	Leu	Ala	Cys	Arg	Cys	Ala	Thr	Leu	Gln	Thr	Val	Met	Arg	Gln	Gln		
385					390					395					400		
agc	ttc	acc	agc	cgc	tac	gga	cct	cct	gtg	tga						1233	
Ser	Phe	Thr	Ser	Arg	Tyr	Gly	Pro	Pro	Val								
				405					410								
<210> 177																	
<211> 410																	
<212> PRT																	
<213> C. elegans																	
<400> 177																	
Met	Ala	Arg	Ala	Val	Asn	Ile	Ser	Pro	Phe	Ala	Ser	Tyr	Thr	Val	Val		
1				5					10					15			
Pro	Ile	Thr	Ser	Ala	Trp	Pro	Pro	Asp	Asp	Leu	Lys	Ala	Asp	Arg	Val		
			20					25					30				
Gln	Leu	Ala	Ser	Phe	Thr	Thr	Gly	Lys	Ala	Leu	Leu	Ala	Ile	Ala	Ile		
		35					40					45					
Leu	Ala	Met	Ile	Ile	Met	Thr	Thr	Val	Gly	Asn	Ala	Leu	Val	Cys	Leu		
	50					55					60						
Ala	Val	Leu	Leu	Val	Arg	Lys	Leu	Lys	His	Pro	Gln	Asn	Phe	Leu	Leu		
65					70					75					80		

# ATTORNEY DOCKET NO. 6223.N

Val	Ser	Leu	Ala	Val	Ala	Asp	Phe	Phe	Val	Gly	Leu	Val	Val	Met	Pro	85	90	95
Leu	Ala	Leu	Ile	Asp	Leu	Leu	Phe	Asp	Lys	Trp	Pro	Leu	Gly	Ser	Thr	100	105	110
Met	Cys	Ser	Val	Tyr	Thr	Thr	Ser	Asp	Leu	Thr	Leu	Cys	Thr	Ala	Ser	115	120	125
Ile	Val	Asn	Leu	Cys	Ala	Ile	Ser	Val	Asp	Arg	Tyr	Leu	Val	Ile	Ser	130	135	140
Ser	Pro	Leu	Arg	Tyr	Ser	Ala	Lys	Arg	Thr	Thr	Lys	Arg	Ile	Met	Met	145	150	155
Tyr	Ile	Ala	Cys	Val	Trp	Ile	Ile	Ala	Ala	Ile	Val	Ser	Ile	Ser	Ser	165	170	175
His	Ile	Ile	Ala	Asn	Leu	Leu	Asn	Asp	Gly	Thr	Tyr	Val	Asp	Asp	Thr	180	185	190
Gly	Thr	Cys	Gln	Val	Ile	Pro	His	Phe	Ile	Tyr	Gln	Ser	Tyr	Ala	Thr	195	200	205
Ile	Ile	Ser	Phe	Tyr	Ala	Pro	Thr	Phe	Ile	Met	Val	Ile	Leu	Asn	Ile	210	215	220
Lys	Ile	Trp	Arg	Ala	Ala	Lys	Arg	Leu	Ala	Ala	Gln	Asp	Arg	Leu	Met	225	230	235
Ser	His	Cys	Asn	Ser	Val	Asp	Ala	Ser	Glu	Arg	Pro	Arg	Asn	Gly	Ser	245	250	255
Ala	Glu	Thr	Lys	Asp	Phe	Leu	Asn	Glu	Lys	Glu	Thr	Ile	Asp	Val	Pro	260	265	270
Lys	Lys	Glu	Arg	Ala	Asn	Ser	Thr	Asn	Ser	Arg	Leu	Phe	Lys	Leu	Glu	275	280	285
Arg	Lys	Tyr	Leu	His	Arg	Pro	Ser	Ala	Phe	Phe	Ser	Ala	Ala	Lys	Gly	290	295	300
Pro	Leu	Ile	Arg	Gln	Thr	Glu	Lys	Ser	Glu	Cys	Lys	Ala	Arg	Lys	Thr	305	310	315
Leu	Gly	Val	Ile	Met	Ser	Val	Phe	Ile	Ile	Cys	Trp	Leu	Pro	Phe	Phe	325	330	335
Ile	Leu	Ala	Ile	Phe	Lys	Ser	Phe	Gly	Met	Trp	Ile	Pro	Asp	Trp	Leu	340	345	350
Asp	Leu	Leu	Ala	Leu	Trp	Leu	Gly	Tyr	Ser	Asn	Ser	Thr	Leu	Asn	Pro	355	360	365
Leu	Ile	Tyr	Cys	Lys	Tyr	Asn	Lys	Glu	Phe	Arg	Ile	Pro	Phe	Arg	Glu	370	375	380
Met	Leu	Ala	Cys	Arg	Cys	Ala	Thr	Leu	Gln	Thr	Val	Met	Arg	Gln	Gln	385	390	395
Ser	Phe	Thr	Ser	Arg	Tyr	Gly	Pro	Pro	Val							405	410	

# ATTORNEY DOCKET NO. 6223.N

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Glu Asn Tyr Thr Ile Ala Val Thr Phe Phe Met Ile Phe Leu Leu Ser
20 25 30

gtc gtc gga aat tcg gtg gtt ttg ata gtg att att aag caa cgt gca 144
Val Val Gly Asn Ser Val Val Leu Ile Val Ile Ile Lys Gln Arg Ala
35 40 45

atg cga tca ata acc aat ata tat tta atg aat ctg gcg gca tcg gat 192
Met Arg Ser Ile Thr Asn Ile Tyr Leu Met Asn Leu Ala Ala Ser Asp
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Met Met Leu Ser Val Val Cys Met Pro Pro Thr Leu Val Ser Met Val
65 70 75 80

atg aat tgt tgg atg ttc ggc aat tat atg tgc aaa att ttg gct tat 288
Met Asn Cys Trp Met Phe Gly Asn Tyr Met Cys Lys Ile Leu Ala Tyr
85 90 95

ttg caa ccc gta gta gtc act gct tca gcg tac acc cta gca gta atc 336
Leu Gln Pro Val Val Val Thr Ala Ser Ala Tyr Thr Leu Ala Val Ile
100 105 110

gca ttc gag agg tac ttt gca att tgc aag ccg ctt cac tca agg att 384
Ala Phe Glu Arg Tyr Phe Ala Ile Cys Lys Pro Leu His Ser Arg Ile
115 120 125

tgg caa acc aga tcc cac gcc tac gca atg atc aca ctt gtg tgg gtg 432
Trp Gln Thr Arg Ser His Ala Tyr Ala Met Ile Thr Leu Val Trp Val
130 135 140

atc gcc att gcc gcc aat att ctg atg ctt ttt atg tac gaa caa caa 480
Ile Ala Ile Ala Ala Asn Ile Leu Met Leu Phe Met Tyr Glu Gln Gln
145 150 155 160

acg tat agc tcg aat gga tac acg tgt gct cca att cat ccg ccg att 528
Thr Tyr Ser Ser Asn Gly Tyr Thr Cys Ala Pro Ile His Pro Pro Ile
165 170 175

tat cat ttt gct tat cag gaa aat cgg aaa ttt cac tta aaa tcg ata 576
Tyr His Phe Ala Tyr Gln Glu Asn Arg Lys Phe His Leu Lys Ser Ile
180 185 190
  
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# ATTORNEY DOCKET NO. 6223.N

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gtt gtg atg gcg ggt ttg tac ggc aac gtc att acc tcc cta aaa tcc Val Val Met Ala Gly Leu Tyr Gly Asn Val Ile Thr Ser Leu Lys Ser 210 215 220	672
ggc atc aaa ctg gaa atc gcc tct gtg gat ccg ccg ctc gcc acc gcc Gly Ile Lys Leu Glu Ile Ala Ser Val Asp Pro Pro Leu Ala Thr Ala 225 230 235 240	720
aca acc aca ggt gct aaa aat tta ggc tcc cac tct gac tcg gct cac Thr Thr Thr Gly Ala Lys Asn Leu Gly Ser His Ser Asp Ser Ala His 245 250 255	768
ctt ttg ttg aac aat gtg ctc gtc ggt agc tcg caa tta gct cgt gcc Leu Leu Leu Asn Asn Val Leu Val Gly Ser Ser Gln Leu Ala Arg Ala 260 265 270	816
acg tcg tgc atc gcg ttg aac acg ttt tcc tgc aac aac acc act aac Thr Ser Cys Ile Ala Leu Asn Thr Phe Ser Cys Asn Asn Thr Thr Asn 275 280 285	864
ccc ttc agt acc ctg aca ccg ccg ccg ccg att cag cag aaa aat cga Pro Phe Ser Thr Leu Thr Pro Pro Pro Pro Ile Gln Gln Lys Asn Arg 290 295 300	912
tcg aag ccg caa ctt ctg cag ctg ccc gga aaa atc gat aat ttc gaa Ser Lys Pro Gln Leu Leu Gln Leu Pro Gly Lys Ile Asp Asn Phe Glu 305 310 315 320	960
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# ATTORNEY DOCKET NO. 6223.N

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gat atc aac aca ttc atc act ctt ctt acc tat att tct tca tgc acc 1392  
 Asp Ile Asn Thr Phe Ile Thr Leu Leu Thr Tyr Ile Ser Ser Cys Thr  
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aat ccc atc aca tat tgc ttc ctg aac aaa aaa ttt agg aat gcg gtg 1440  
 Asn Pro Ile Thr Tyr Cys Phe Leu Asn Lys Lys Phe Arg Asn Ala Val  
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tat gca aca ttt ggc agg aag aaa aat atg cga cat cat ttt cag aag 1488  
 Tyr Ala Thr Phe Gly Arg Lys Lys Asn Met Arg His His Phe Gln Lys  
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gta tat ttt gat att ttt gaa tta ttg ata ttt ttt aaa atc aat tat 1536  
 Val Tyr Phe Asp Ile Phe Glu Leu Leu Ile Phe Phe Lys Ile Asn Tyr  
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 515 520 525

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 Phe Gly Phe Ser Ala Pro Leu Ile Ser Val Asn Leu Ser Leu Ile Leu  
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Val Val Gly Asn Ser Val Val Leu Ile Val Ile Ile Lys Gln Arg Ala  
 35 40 45

Met Arg Ser Ile Thr Asn Ile Tyr Leu Met Asn Leu Ala Ala Ser Asp  
 50 55 60

Met Met Leu Ser Val Val Cys Met Pro Pro Thr Leu Val Ser Met Val  
 65 70 75 80

# ATTORNEY DOCKET NO. 6223.N

Met	Asn	Cys	Trp	Met	Phe	Gly	Asn	Tyr	Met	Cys	Lys	Ile	Leu	Ala	Tyr		
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Leu	Gln	Pro	Val	Val	Val	Thr	Ala	Ser	Ala	Tyr	Thr	Leu	Ala	Val	Ile		
			100					105					110				
Ala	Phe	Glu	Arg	Tyr	Phe	Ala	Ile	Cys	Lys	Pro	Leu	His	Ser	Arg	Ile		
		115					120					125					
Trp	Gln	Thr	Arg	Ser	His	Ala	Tyr	Ala	Met	Ile	Thr	Leu	Val	Trp	Val		
		130				135					140						
Ile	Ala	Ile	Ala	Ala	Asn	Ile	Leu	Met	Leu	Phe	Met	Tyr	Glu	Gln	Gln		
145					150					155					160		
Thr	Tyr	Ser	Ser	Asn	Gly	Tyr	Thr	Cys	Ala	Pro	Ile	His	Pro	Pro	Ile		
				165					170					175			
Tyr	His	Phe	Ala	Tyr	Gln	Glu	Asn	Arg	Lys	Phe	His	Leu	Lys	Ser	Ile		
			180					185					190				
Ile	Tyr	Phe	Gln	Val	Tyr	Met	Thr	Val	Val	Leu	Leu	Val	Ile	Pro	Leu		
		195					200					205					
Val	Val	Met	Ala	Gly	Leu	Tyr	Gly	Asn	Val	Ile	Thr	Ser	Leu	Lys	Ser		
	210					215					220						
Gly	Ile	Lys	Leu	Glu	Ile	Ala	Ser	Val	Asp	Pro	Pro	Leu	Ala	Thr	Ala		
225					230					235					240		
Thr	Thr	Thr	Gly	Ala	Lys	Asn	Leu	Gly	Ser	His	Ser	Asp	Ser	Ala	His		
			245						250					255			
Leu	Leu	Leu	Asn	Asn	Val	Leu	Val	Gly	Ser	Ser	Gln	Leu	Ala	Arg	Ala		
			260					265					270				
Thr	Ser	Cys	Ile	Ala	Leu	Asn	Thr	Phe	Ser	Cys	Asn	Asn	Thr	Thr	Asn		
		275					280					285					
Pro	Phe	Ser	Thr	Leu	Thr	Pro	Pro	Pro	Pro	Ile	Gln	Gln	Lys	Asn	Arg		
	290					295					300						
Ser	Lys	Pro	Gln	Leu	Leu	Gln	Leu	Pro	Gly	Lys	Ile	Asp	Asn	Phe	Glu		
305					310					315					320		
Glu	Phe	Arg	Leu	Gln	Cys	Leu	Ser	Asp	Cys	Arg	Ser	Asp	Gly	Val	Leu		
			325						330					335			
Phe	Pro	Pro	Pro	Ala	Ile	Val	Ala	Ser	Met	Thr	Asp	Glu	Gln	Lys	Leu		
			340					345					350				
Ser	Phe	Trp	Asn	Lys	Leu	Ser	Asn	Lys	Leu	Thr	Phe	Ser	Gln	Gln	Asp		
		355					360					365					
Lys	Thr	Val	Gln	His	Pro	Asn	Phe	Gly	His	Arg	Lys	Ser	Asp	Thr	Ser		
		370				375					380						
Ile	Cys	Leu	Glu	Asn	Pro	Ser	Leu	Arg	Ser	Thr	His	Thr	Gln	Lys	Ser		
385					390					395					400		
Ala	Met	Ala	Lys	Gln	Arg	Val	Ile	Lys	Met	Leu	Ile	Val	Val	Val	Ile		
				405					410					415			

# ATTORNEY DOCKET NO. 6223.N

Ile Phe Phe Cys Cys Trp Thr Pro Ser Tyr Ile Trp Trp Leu Leu Leu  
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Ile Ala Gly Asp Ser Phe Gln Ser Leu Asn Leu Ser Val Trp Asn Ser  
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Asp Ile Asn Thr Phe Ile Thr Leu Leu Thr Tyr Ile Ser Ser Cys Thr  
450 455 460

Asn Pro Ile Thr Tyr Cys Phe Leu Asn Lys Lys Phe Arg Asn Ala Val  
465 470 475 480

Tyr Ala Thr Phe Gly Arg Lys Lys Asn Met Arg His His Phe Gln Lys  
485 490 495

Val Tyr Phe Asp Ile Phe Glu Leu Leu Ile Phe Phe Lys Ile Asn Tyr  
500 505 510

Gln Lys Ser Ile Lys Ser Pro Val Ser Val Phe Ser Asn Tyr Leu Phe  
515 520 525

Phe Gly Phe Ser Ala Pro Leu Ile Ser Val Asn Leu Ser Leu Ile Leu  
530 535 540

Phe Arg Ser Thr Phe Arg Ser Thr Ala Glu Leu Ile Thr Leu Thr Lys  
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Glu Ser Arg Asp Lys Leu Leu Thr Gly Thr Asn Thr His Lys Phe Val  
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Val Ile Ser Leu Phe Val  
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<213> Artificial Sequence

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Phe Asp Asp Tyr Gly His Leu Arg Pro

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5